Permit Number: AR0022063
AFIN: 72-00003

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

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

Springdale Water and Sewer Commission
Springdale Wastewater Treatment Facilities

is authorized to discharge treated municipal wastewater from a facility located as follows: 2910 Silent Grove Road, Springdale, AR, in Benton County, take Exit 76 from I-540 and head east on Wagon Wheel Road, then turn south onto Silent Grove Road.

Facility Coordinates: Latitude: 36° 12’ 40.38” N; Longitude: 94° 09’ 37.80” W

Receiving stream: Spring Creek, then to Osage Creek, then to the Illinois River in Segment 3J of the Arkansas River Basin.

The permitted outfall is located at the following coordinates:

Outfall 001: Latitude: 36° 12’ 49” N; Longitude: 94° 09’ 52” W

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

Effective Date: January 1, 2022
Expiration Date: December 31, 2026

Alan J. York
Associate Director, Office of Water Quality
Arkansas Department of Energy and Environment
Division of Environmental Quality

12/01/2021
Issue Date

PART I
PERMIT REQUIREMENTS

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

During the period beginning on the effective date and lasting three years, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions.

Effluent Characteristics	**Discharge Limitations**			**Monitoring Requirements**	
	Mass (lbs/day, else specified)	Concentration (mg/L, else specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Max.)	once/day	totalizing meter
Overflows	monthly total ssos (occurrences/month)			see comments[1]	
Overflow Volume	monthly total volume of ssos (gallons/month)			see comments[1]	
Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)					
(January – February)	5,004.0	25	38	once/week	composite[7]
(March – December)	2,001.6	10	15	once/week	composite[7]
Total Suspended Solids (TSS)					
(January – February)	6,004.8	30.0	45.0	once/week	composite[7]
(March – December)	3,002.4	15.0	22.5	once/week	composite[7]
Ammonia Nitrogen (NH_3-N)					
(May – October)	300.2	1.5	2.3	once/day	composite[7]
(November – March)	800.6	4.0	6.0	once/day	composite[7]
(April)	320.3	1.6	3.9	once/day	composite[7]
Dissolved Oxygen (DO)	N/A	6.5 (Inst. Min.)		four/week	grab
Fecal Coliform Bacteria (FCB)		(colonies/100mL)			
(May – September)	N/A	200	400	once/week	grab
(October – April)	N/A	1000	2000	once/week	grab
Total Residual Chlorine (TRC)[2]	N/A	< 0.1 (Inst. Max.)[3]		once/week	grab
Total Phosphorus (TP)	200.2	1.0 (6-month rolling avg.)[6]	1.5	twice/month	composite[7]
Nitrate + Nitrite Nitrogen ($NO_3 + NO_2$-N)	N/A	Report	Report	twice/month	composite[7]
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	six/week	grab

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, else specified)	Concentration (mg/L, else specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Chronic WET Testing[4]					
***Pimephales promelas* (Chronic)[4]**					
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	composite[8]
Pass/Fail Growth (7-day NOEC) TGP6C		Report (Pass=0/Fail=1)		once/quarter	composite[8]
Survival (7-day NOEC) TOP6C		Report %		once/quarter	composite[8]
Coefficient of Variation (Growth) TQP6C		Report %		once/quarter	composite[8]
Growth (7-day NOEC) TPP6C		Report %		once/quarter	composite[8]
Pass/Fail Retest 1 (7-day NOEC) 22418		Report (Pass=0/Fail=1)		once/month[5]	composite[8]
Pass/Fail Retest 2 (7-day NOEC) 22419		Report (Pass=0/Fail=1)		once/month[5]	composite[8]
Pass/Fail Retest 3 (7-day NOEC) 51444		Report (Pass=0/Fail=1)		once/month[5]	composite[8]
***Ceriodaphnia dubia* (Chronic)[4]**					
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	composite[8]
Pass/Fail Reproduction (7-day NOEC) TGP3B		Report (Pass=0/Fail=1)		once/quarter	composite[8]
Survival (7-day NOEC) TOP3B		Report %		once/quarter	composite[8]
Coefficient of Variation (Reproduction) TQP3B		Report %		once/quarter	composite[8]
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	composite[8]
Pass/Fail Retest 1 (7-day NOEC) 22415		Report (Pass=0/Fail=1)		once/month[5]	composite[8]
Pass/Fail Retest 2 (7-day NOEC) 22416		Report (Pass=0/Fail=1)		once/month[5]	composite[8]
Pass/Fail Retest 3 (7-day NOEC) 51443		Report (Pass=0/Fail=1)		once/month[5]	composite[8]

1 See Part II.5 (SSO Condition). If there are no overflows during the entire month, report "zero" (0).
2 See Part II.10 (TRC Condition).
3 The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling.
4 See Part II.8 (WET Testing Condition).
5 CONDITIONAL REPORTING: Use only if conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution). If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one routine toxicity test. If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under retest parameters (reported on a quarterly DMR). This condition applies to *P. promelas* and *C. dubia*.
6 See Part II.11 (Total Phosphorus rolling average formula).
7 See Part IV.9.
8 See Part II.8.C.iv.a.

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after the final treatment unit and prior to entering the receiving stream.

PART I
PERMIT REQUIREMENTS

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

During the period beginning on three years from the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below as well as Parts II and III. See Part IV for all definitions.

Effluent Characteristics	**Discharge Limitations**			**Monitoring Requirements**	
	Mass (lbs/day, else specified)	Concentration (mg/L, else specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Max.)	once/day	totalizing meter
Overflows	monthly total ssos (occurrences/month)			see comments[1]	
Overflow Volume	monthly total volume of ssos (gallons/month)			see comments[1]	
Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)					
(January – February)	5,004.0	25	38	once/week	composite[7]
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Total Suspended Solids (TSS)					
(January – February)	6,004.8	30.0	45.0	once/week	composite[7]
(March – December)	3,002.4	15.0	22.5	once/week	composite[7]
Ammonia Nitrogen (NH_3-N)					
(May – October)	300.2	1.5	2.3	once/day	composite[7]
(November – March)	800.6	4.0	6.0	once/day	composite[7]
(April)	320.3	1.6	3.9	once/day	composite[7]
Dissolved Oxygen (DO)	N/A	6.5 (Inst. Min.)		four/week	grab
Fecal Coliform Bacteria (FCB)		(colonies/100mL)			
(May – September)	N/A	200	400	once/week	grab
(October – April)	N/A	1000	2000	once/week	grab
Total Residual Chlorine (TRC)[2]	N/A	0.011 (Inst. Max.)[3]		once/week	grab
Total Phosphorus (TP)	200.2	1.0 (6-month rolling avg.)[6]	1.5	twice/month	composite[7]
Nitrate + Nitrite Nitrogen (NO_3 + NO_2-N)	N/A	Report	Report	twice/month	composite[7]
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	six/week	grab

Effluent Characteristics	Discharge Limitations			Monitoring Requirements	
	Mass (lbs/day, else specified)	Concentration (mg/L, else specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Chronic WET Testing[4]					
***Pimephales promelas* (Chronic)[4]**					
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Pass/Fail Growth (7-day NOEC) TGP6C		Report (Pass=0/Fail=1)		once/quarter	composite[8]
Survival (7-day NOEC) TOP6C		Report %		once/quarter	composite[8]
Coefficient of Variation (Growth) TQP6C		Report %		once/quarter	composite[8]
Growth (7-day NOEC) TPP6C		Report %		once/quarter	composite[8]
Pass/Fail Retest 1 (7-day NOEC) 22418		Report (Pass=0/Fail=1)		once/month[5]	composite[8]
Pass/Fail Retest 2 (7-day NOEC) 22419		Report (Pass=0/Fail=1)		once/month[5]	composite[8]
Pass/Fail Retest 3 (7-day NOEC) 51444		Report (Pass=0/Fail=1)		once/month[5]	composite[8]
***Ceriodaphnia dubia* (Chronic)[4]**					
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	composite[8]
Pass/Fail Reproduction (7-day NOEC) TGP3B		Report (Pass=0/Fail=1)		once/quarter	composite[8]
Survival (7-day NOEC) TOP3B		Report %		once/quarter	composite[8]
Coefficient of Variation (Reproduction) TQP3B		Report %		once/quarter	composite[8]
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	composite[8]
Pass/Fail Retest 1 (7-day NOEC) 22415		Report (Pass=0/Fail=1)		once/month[5]	composite[8]
Pass/Fail Retest 2 (7-day NOEC) 22416		Report (Pass=0/Fail=1)		once/month[5]	composite[8]
Pass/Fail Retest 3 (7-day NOEC) 51443		Report (Pass=0/Fail=1)		once/month[5]	composite[8]

1 See Part II.5 (SSO Condition). If there are no overflows during the entire month, report "zero" (0).
2 See Part II.10 (TRC Condition).
3 The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling.
4 See Part II.8 (WET Testing Condition).
5 CONDITIONAL REPORTING: Use only if conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution). If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one routine toxicity test. If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under retest parameters (reported on a quarterly DMR). This condition applies to *P. promelas* and *C. dubia*.
6 See Part II.11 (Total Phosphorus rolling average formula).
7 See Part IV.9.
8 See Part II.8.C.iv.a.

Oil, grease, or petrochemical substances shall not be present in receiving waters to the extent that they produce globules or other residue or any visible, colored film on the surface or coat the banks and/or bottoms of the waterbody or adversely affect any of the associated biota. There shall be no visible sheen as defined in Part IV of this permit.

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after the final treatment unit and prior to entering the receiving stream.

SECTION B. PERMIT COMPLIANCE SCHEDULE

1. The permittee must conduct an analysis of potential phosphorus concentration reduction in the effluent. The permittee must submit the results of this analysis to DEQ with the permit renewal application.

2. Pursuant to 40 CFR 122.44(j)(2)(ii), the permittee shall submit either of the following items within sixty (60) days of the effective date of this permit:

   A. A **WRITTEN CERTIFICATION** that a technical evaluation has demonstrated that the existing technically based local limits (TBLLs) are based on current state water quality standards and are adequate to prevent pass through of pollutants, inhibition of or interference with the treatment facility, worker health and safety problems, and sludge contamination.

   B. A **WRITTEN NOTIFICATION** that a technical evaluation revising the current TBLLs will be submitted within twelve (12) months of the effective date of this permit.

   See Part II.7.B of this permit for more information.

3. Compliance with the Final Effluent Limitation for Total Residual Chlorine is required three years after the effective date of the permit. The permittee shall submit progress reports addressing the progress towards attaining the Final Effluent Limitations for the aforementioned parameters according to the following schedule:

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

All progress reports must be submitted to the Division at the following address:

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

Information can also be submitted electronically via email at water-enforcement-report@adeq.state.ar.us.

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

[2] If the permittee is not in compliance with the Final Limitations following one (1) year of sampling, the initial Progress Report must detail how the permittee plans to come into compliance with the final limits within the remaining two (2) years of the interim period.

Options must be provided that were considered along with which option* was selected. Any Best Management Practices (BMPs) that have been instituted to reduce the concentration in the influent must also be discussed. If a study will be performed, a milestone schedule for the study must be provided.

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

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

[4] A final Progress Report must be submitted no later than thirty (30) days following the final compliance date and include a certification that the final effluent limits were met on the effective date and that the limits are still being met.

PART II
OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall be licensed as Class IV by the State of Arkansas in accordance with APC&EC Rule 3.

2. For publicly owned treatment works, the 30-day average percent removal for Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) and Total Suspended Solids (TSS) shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR Part 133.102, as adopted by reference in APC&EC Rule 6.

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

4. Other Specified Monitoring Requirements

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

   - The monitoring and analytical instruments are consistent with accepted scientific practices.
   - The requests shall be submitted in writing to the Permits Branch of the Office of Water Quality of the DEQ for use of the alternate method or instrument.
   - The method and/or instrument is in compliance with 40 CFR Part 136 or approved in accordance with 40 CFR Part 136.5.
   - All associated devices are installed, calibrated, and maintained to ensure the accuracy of the measurements and are consistent with the accepted capability of that type of device. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Assurance/Quality Control (QA/QC) program.

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

5. Sanitary Sewer Overflow (SSO) Reporting Requirements:

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

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

B. 24-Hour Reporting:

When an SSO is detected – no matter how small – it must be reported within 24 hours of its discovery to DEQ's Water Quality Enforcement by using the online form in Paragraph C below (the preferred method), by phone at (501) 682-0638, or by email at ssoadeq@adeq.state.ar.us.

This initial 24-hour report should include the following information:

1. Permit Number
2. Location of overflow (manhole number or street address)
3. The receiving water (if applicable)
4. Cause of overflow (if known)
5. Estimated volume of overflow so far
6. Total duration of the overflow

C. 5-Day Follow-Up Written Web Reporting:

A written report of overflows shall be provided to DEQ within 5 days of the 24-hour oral report. A follow-up written report (5-day report) can be filled-in and submitted on the DEQ Office of Water Quality/Enforcement Branch Web page at:

https://www.adeq.state.ar.us/water/enforcement/sso/submit.aspx?type=s

D. 24-Hour and 5-Day Reporting:

If the 24-hour report submitted includes all of the information requested in the 5-day report described in Paragraph C above, then a follow-up 5-day report is not required.

E. Reporting for All SSOs on DMR:

At the end of the month, total the daily occurrences and volumes from all locations on your system and report this number on the DMR. For counting occurrences, each location on the sanitary sewer system where there is an overflow, spill, release, or diversion of wastewater on a given day is counted as one occurrence. For example, if on a given day overflows occur from a manhole at one location and from a damaged pipe at another location then you should record two occurrences for that day.

6. Best Management Practices (BMPs), as defined in Part IV.7, must be implemented for the facility along with the collection system to prevent or reduce the pollution of waters of the state from stormwater runoff, spills or leaks, sludge or waste disposal, or drainage from raw sewage. The permittee must amend the BMPs whenever there is a change in the facility or a change in the operation of the facility.

7. Contributing Industries and Pretreatment Requirements

   A. The permittee shall operate an industrial pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act (CWA), the General Pretreatment Regulations (40 CFR Part 403), and the approved POTW pretreatment program submitted by the permittee. The pretreatment program was originally approved on January 1, 1984, and modified and approved on May 16, 2000. The POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

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

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

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

      (4) The permittee shall control through permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under 40 CFR 403.3 (v), this control shall be achieved through individual control mechanisms, in accordance with 40 CFR 403.8(f)(1)(iii). Control mechanisms must be enforceable and contain, at a minimum, the following conditions:

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

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

         c. Effluent limits, including Best Management Practices, based on applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;

         d. Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored, sampling location, sampling frequency, and sample type, based on the applicable general Pretreatment

Standards in 40 CFR 403, categorical Pretreatment Standards, local limits, and State and local law;

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

f. Requirements to control slug discharges, if determined by the POTW to be necessary.

(5) The permittee shall evaluate whether each Significant Industrial User needs a plan or other action to control slug discharges, in accordance with 40 CFR 403.8(f)(2)(vi);

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

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

B. The permittee shall establish and enforce specific limits to implement the provisions of 40 CFR Parts 403.5(a) and (b), as required by 40 CFR Part 403.5(c). POTWs may develop Best Management Practices (BMPs) to implement 40 CFR 403.5(c)(1) and (c)(2). Such BMPs shall be considered local limits and Pretreatment Standards. Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits.

The permittee shall submit, within sixty (60) days of the effective date of this permit, (1) a **WRITTEN CERTIFICATION** that a technical evaluation has demonstrated that the existing technically based local limits (TBLLs) are based on current state water quality standards and are adequate to prevent pass through of pollutants, inhibition of or interference with the treatment facility, worker health and safety problems, and sludge contamination, or (2) a **WRITTEN NOTIFICATION** that a technical evaluation revising the current TBLLs will be submitted within 12 months of the effective date of this permit.

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

C. The permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table II at least once per year and the toxic pollutants in Table III at least four (4) times per year (quarterly). If, based upon information available to the permittee, there is reason to suspect the presence of any toxic or hazardous pollutant listed in Table V of 40 CFR 122 Appendix D, or any other pollutant, known or suspected to adversely affect treatment plant operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed at least four (4) times per year (quarterly) on both the influent and the effluent.

The influent and effluent samples collected shall be composite samples, as defined in Part IV.9 of the permit. In accordance with 40 CFR 122.21(j)(4)(viii), where composite samples are inappropriate due to sampling, holding time or analytical constraints, at least four (4) grab samples shall be taken at equal intervals over a representative 24-hour period. Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR 136.

D. The permittee shall prepare annually a list of Industrial Users which, during the preceding twelve months (the Pretreatment "Reporting Year"), were in significant noncompliance with applicable pretreatment requirements. For the purposes of this Part, significant noncompliance shall be determined based upon the more stringent of either criteria established at 40 CFR Part 403.8(f)(2)(viii) or criteria established in the approved POTW pretreatment program. This list is to be published annually during the month of January in a newspaper of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW.

In addition, by 4:30 P.M. Central Time (if electronically submitted) OR postmarked on or before the last business day in the month of January the permittee shall submit an updated pretreatment program status report to the ADEQ containing the following information:

(1) An updated list of all significant industrial users. The list must also identify:

a. Industrial Users classified as Non-Significant Categorical Industrial Users (NSCIUs) or Middle-Tier CIUs.

b. Industrial Users subject to categorical Pretreatment Standards that are subject to reduced monitoring and reporting requirements under 40 CFR 403.12(e)(2) and (3).

c. Industrial Users subject to the categorical Pretreatment Standards of the following Point Source Categories: Organic Chemicals, Plastics, and Synthetic Fibers - 40 CFR Part 414, Petroleum Refining - 40 CFR Part 419, and Pesticide Chemicals - 40 CFR Part 455 and for which the Control Authority has chosen to use the concentration-based standards rather than converting them to flow-based mass standards as allowed at 40 CFR 403.6(c)(6).

d. Categorical Industrial Users subject to concentration-based standards for which the Control Authority has chosen to convert the concentration-based standards to equivalent mass limits, as allowed at 40 CFR 403.6(c)(5).

e. General Control Mechanisms used for similar groups of SIUs along with the substantially similar types of operations and the types of wastes that are the same, for each separate General Control Mechanism, as allowed at 40 CFR 403.8(f)(1)(iii).

f. Best Management Practices or Pollution Prevention alternatives required by a categorical Pretreatment Standard or as a local limit requirement that are

implemented and documentation to demonstrate compliance, as required at 40 CFR 403(b), (e), and (h).

(2) For each industrial user listed the following information shall be included:

a. Standard Industrial Classification (SIC) code, North American Industry Classification System (NAICS) code and categorical determination;

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

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

i. total number of inspections performed;

ii. total number of sampling visits made;

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

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

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

iii. Significant Noncompliance (SNC) - in accordance with requirements described in Item D above; and

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

(3) A list of all significant industrial users whose authorization to discharge was terminated or revoked during the preceding 12-month period and the reason for termination;

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

(5) The results of all influent and effluent analyses performed pursuant to Item C above;

(6) An influent/effluent summary chart containing the monthly average water quality-based effluent concentration demonstrating compliance with permit limits or the water quality levels not to exceed as developed in the permittee's approved technically based local limits document.

(7) The information requested may be submitted in tabular form as per the example tables provided for your convenience (See Attachments II, III and IV); and

(8) A copy of the newspaper publication of the significantly noncompliant industrial users giving the name of the newspaper and the date published.

E. The permittee shall provide adequate notice of the following:

(1) Any new introduction of pollutants into the treatment works from an indirect discharger that would be subject to Sections 301 and 306 of the CWA if it were directly discharging those pollutants; and

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

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

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

A. SCOPE AND METHODOLOGY

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

APPLICABLE TO FINAL OUTFALL:	001
REPORTED ON DMR AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	100%
EFFLUENT DILUTION SERIES (%):	32%, 42%, 56%, 75%, 100%
TESTING FREQUENCY:	once/quarter
COMPOSITE SAMPLE TYPE:	Defined in Paragraph C.iv.a
TEST SPECIES/METHODS:	40 CFR Part 136

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

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

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

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

B. PERSISTENT LETHAL and/or SUB-LETHAL EFFECTS

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

If a frequency reduction, as specified in Item F, has been granted and any valid test demonstrates significant lethal or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the life of the permit. In addition:

i. Part I Testing Frequency Other Than Monthly

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

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

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

d. The provisions of Item B.i.a are suspended upon submittal of the TRE Action Plan.

C. REQUIRED TOXICITY TESTING CONDITIONS

i. Test Acceptance

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

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

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

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

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

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

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

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

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

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

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

ii. Statistical Interpretation

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

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

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

iii. Dilution Water

a. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee

shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

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

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

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

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

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

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

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

iv. Samples and Composites

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

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

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

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

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

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

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

D. REPORTING

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

ii. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit. The full reports for all valid tests, invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for agency review.

iii. The permittee shall submit the results of each valid toxicity test and retest on the subsequent DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Only results of valid tests are to be reported on the DMR.

a. *Pimephales promelas* (Fathead minnow)

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

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

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

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

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

(6) If conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution):

(A) Consecutive Monthly Retest 1: If the NOEC (lowest lethal or sub-lethal) for *P. promelas* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 22418 (reported on quarterly DMR);

(B) Consecutive Monthly Retest 2: If the NOEC (lowest lethal or sub-lethal) for *P. promelas* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 22419 (reported on quarterly DMR);

(C) Consecutive Monthly Retest 3: If the NOEC (lowest lethal or sub-lethal) for *P. promelas* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 51444 (reported on quarterly DMR);

(D) If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one scheduled toxicity test;

(E) If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under Parameter Nos. 22418, 22419, 51444 (reported on quarterly DMR)

b. *Ceriodaphnia dubia*

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

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

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

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

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

(6) If conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution):

(A) Consecutive Monthly Retest 1: If the NOEC (lowest lethal or sub-lethal) for *C. dubia* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 22415 (reported on quarterly DMR);

(B) Consecutive Monthly Retest 2: If the NOEC (lowest lethal or sub-lethal) for *C. dubia* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 22416 (reported on quarterly DMR);

(C) Consecutive Monthly Retest 3: If the NOEC (lowest lethal or sub-lethal) for *C. dubia* is less than the critical dilution, enter a '1'; otherwise, enter a '0' under Parameter No. 51443 (reported on quarterly DMR);

(D) If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one scheduled toxicity test;

(E) If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under Parameter Nos. 22415, 22416, and 51443 (reported on quarterly DMR)

E. TOXICITY REDUCTION EVALUATIONS (TREs)

TREs for lethal and sub-lethal effects are performed in a very similar manner. EPA Region 6 is currently addressing TREs as follows: a sub-lethal TRE (TRE_{SL}) is triggered based on three sub-lethal test failures while a lethal effects TRE (TRE_{L}) is triggered based on only two test failures for lethality. In addition, EPA Region 6 will consider the magnitude of toxicity and use flexibility when considering a TRE_{SL} where there are no effects at effluent dilutions of 75% or lower.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

F. MONITORING FREQUENCY REDUCTION

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

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

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

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

9. Monitoring Frequency Reduction

With the exception of whole effluent toxicity testing (WET) requirements and Total Phosphorus, the permittee may request a one-time monitoring frequency reduction for pollutants listed in Part I, Section A, *Effluent Limitations and Monitoring Requirements*. Any

request for a monitoring frequency reduction must be submitted in writing to DEQ, and signed by the Responsible Official, in accordance with Part III.D.11.A of the permit.

The following requirements must be met before a review of the monitoring frequency reduction request will be performed:

A. Compliance with the permit limits for at least the last two (2) years for the pollutants for which a request has been made for a monitoring frequency reduction;

B. No operational or design changes have been made to the facility for at least the last two (2) years (or during period of review, if greater than two (2) years), and are not anticipated for the remaining term of this permit.

If the above conditions are met, a detailed review of the DMR data will be performed for the pollutants for which a monitoring frequency reduction has been requested. Compliance with the limits does not guarantee a monitoring frequency reduction will be granted. Data must show that the average concentration of the pollutants in the discharge are less than 75% of the permit limits for a monitoring frequency reduction to be granted.

If a monitoring frequency reduction is granted, the frequency can be reduced to no more than half the rate of the corresponding frequency listed in Part I, Section A, *Effluent Limitations and Monitoring Frequencies*. For example, a monitoring frequency of 4 per month will not be reduced to less than 2 per month. Additionally, the frequency will be no less frequent than monthly.

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

Pollutant	MQL (mg/l)
TRC	0.033

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

$$MQL = 3.3 \times MDL$$

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

11. Total Phosphorus Six Months Rolling Basis Compliance Calculations

Compliance with the six-month average concentration limitation for TP shall be determined as a rolling six-month average and shall be calculated as follows:

Step 1: Determine the mass of TP discharged (lbs) for an individual month by multiplying the average of all concentration values (mg/L) measured in that month, times the total flow volume (Million Gallons, MG) for the month, times the conversion factor of 8.34. The following equation illustrates this calculation:

Monthly mass (lbs) = (Monthly avg conc., mg/L) × (Total monthly flow in MG) × 8.34

Step 2: The monthly mass determined using the above equation for each month shall be summed for the most recent six (6) months and inserted into the numerator of the following equation to determine the six-month average concentration:

$$\text{Six-month average concentration (mg/L)} = \frac{\text{Total lbs (sum of most recent 6 months)}}{\text{Total flow in MG (most recent 6 months)} \times 8.34}$$

This six-month average concentration shall be reported on a 6-month rolling basis on each monthly DMR, which will represent the previous 6 months period. The compliance calculation shall be performed each month after substituting data from the most recent month for the oldest month. A calculated six-month average concentration in excess of the six-month average concentration limitation will be considered equivalent to a violation of a monthly average.

12.Peak Flow Conditions

For the purposes of this permit only, extreme flow conditions are defined as flows in excess of the treatment capability of the WWTP in tandem with the EQ basins at capacity as provided by 40 C.F.R. § 122.41(m)(2), i.e., bypass not exceeding limitations. Extreme flow conditions may also be defined as conditions when the settleability of the mixed liquor suspended solids (MLSS) is such that flows must be decreased to allow for sufficient treatment.

During extreme flow conditions, the permittee may route wastewater to the emergency clarifiers after it exits the grit and scum removal system, which is upstream of the influent pump station at the headworks of the WWTP. The wastewater exiting the emergency clarifiers will be blended with wastewater exiting the polishing filters immediately upstream of the disinfection system.

The following conditions must be met during extreme flow conditions that result in the use of the emergency clarifiers:

A. The permittee must submit a written report to the Division within five calendar days of the discontinuance of routing flow to the emergency clarifiers. This report shall include, at a minimum, the following information:

1. An explanation of the extreme flow conditions that justify using the emergency clarifiers;
2. Starting and ending dates and times of the wastewater flow to the emergency clarifiers;
3. Total influent flow;
4. Amount of flow which was routed to the emergency clarifiers;
5. Amount of flow routed to the primary clarifiers; and
6. Observations of environmental impacts, if any, caused by the routing of wastewater flow to the emergency clarifier.

B. The permittee must sample the effluent for compliance with permit limits in accordance with the limits and sampling frequencies set forth in Part IA of this permit.

   During each calendar week (Sunday through Saturday), at least one of the required effluent samples for each of the BOD_5, TSS, FCB, TRC, and pH samples shall be taken when discharging wastewater that includes extreme flow wastewater routed to the emergency clarifiers, provided any wastewater was routed to those treatment units during the calendar week. All effluent sample results must be included in the calculation of the monthly average and 7-day average values reported on the DMRs.

It is important to note that any changes to the wastewater treatment system may cause the need to reopen this NPDES permit to modify this condition.

PART III
STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. **Duty to Comply**

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

2. **Penalties for Violations of Permit Conditions**

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

3. **Permit Actions**

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

A. Violation of any terms or conditions of this permit.
B. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts.
C. A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge.
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 APC&EC Rule 9 (Permit fees) as required by Part III.A.11 herein.

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

4. **Toxic Pollutants**

Notwithstanding Part III.A.3, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under APC&EC Rule 2, as amended, or Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitations on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standards or prohibition and the permittee so notified.

The permittee shall comply with effluent standards, narrative criteria, or prohibitions established under APC&EC Rule 2, as amended, or Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. **Civil and Criminal Liability**

Except as provided in permit conditions for "Bypass of Treatment Facilities" (Part III.B.4), and "Upset" (Part III.B.5), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of this permit or applicable state and federal statues or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

6. **Oil and Hazardous Substance Liability**

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

7. **State Laws**

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

8. **Property Rights**

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

9. **Severability**

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

10. **Applicable Federal, State or Local Requirements**

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

11. **Permit Fees**

The permittee shall comply with all applicable permit fee requirements (i.e., including annual permit fees following the initial permit fee that will be invoiced every year the permit is active) for wastewater discharge permits as described in APC&EC Rule 9 (Rule for the Fee System for Environmental Permits). Failure to remit all required fees promptly shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 CFR Parts 122.64 and 124.5(d), as adopted in APC&EC Rule 6 and the provisions of APC&EC Rule 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 ensure 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**

"Bypass" means the intentional diversion of waste streams from any portion of a treatment facility, as defined at 40 CFR Part 122.41(m)(1)(i).

A. Bypass not exceeding limitation

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

B. Notice

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

C. Prohibition of bypass

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

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

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

5. **Upset Conditions**

A. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part III.B.5.B of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

B. Conditions necessary for demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that the permittee can identify the specific cause(s) of the upset.
2. The permitted facility was at the time being properly operated.
3. The permittee submitted notice of the upset as required by Part III.D.6.
4. The permittee complied with any remedial measures required by Part III.B.3.

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

6. **Removed Substances**

A. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State. The Permittee must comply with all applicable state and Federal regulations governing the disposal of sludge, including but not limited to 40 CFR Part 503, 40 CFR Part 257, and 40 CFR Part 258.

B. Any changes to the permittee's disposal practices described in the Fact Sheet, as derived from the permit application, will require at least 180 days prior notice to the Director to allow time for additional permitting. Please note that the 180 day notification requirement may be waived if additional permitting is not required for the change.

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 discharge shall be monitored.

2. **Flow Measurement**

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

Calculated Flow Measurement

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

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 ensure accuracy of measurements and shall ensure 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 ensure 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**

40 CFR Part 127.11(a)(1) and 40 CFR Part 127.16(a) require that monitoring reports must be reported on a Discharge Monitoring Reports (DMR) and filed electronically. Signatory Authorities must initially request access for a NetDMR account. Once a NetDMR account is established, access to electronic filing should use the following link https://cdx.epa.gov.

Permittees who are unable to file electronically may request a waiver from the Director in accordance with 40 CFR Part 127.15. Monitoring results obtained during the previous monitoring period shall be summarized and reported on a DMR dated and submitted no later than the 25th day of the month, following the completed reporting period beginning on the effective date of the permit.

6. **Additional Monitoring by the Permittee**

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

7. **Retention of Records**

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

8. **Record Contents**

Records and monitoring information shall include:

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

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 to the Director as soon as possible but no later than 180 days prior to any planned physical alterations or additions to the permitted facility [40 CFR Part 122.41(l)]. Notice is required only when:

A. The alteration or addition to a permitted facility may meet one of the criteria for new sources at 40 CFR Part 122.29(b).
B. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject to effluent limitations in the permit, or to the notification requirements under 40 CFR Part 122.42(b).

2. **Anticipated Noncompliance**

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

3. **Transfers**

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

4. **Monitoring Reports**

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

5. **Compliance Schedule**

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

6. **Twenty-four Hour Report**

Please be aware that the notifications can be sent by email to water-enforcement-report@adeq.state.ar.us or at 501-682-0624 for immediate reporting:

A. The permittee shall report any noncompliance which may endanger health or the environment within 24 hours from the time the permittee becomes aware of the circumstances to the Enforcement Branch of the Office of Water Quality of DEQ. 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.
3. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

B. The following 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.
3. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part I of the permit.

C. The Director may waive the written report on a case-by-case basis if the notification has been received within 24 hours to the Enforcement Branch of the Office of Water Quality of the DEQ.

7. **Other Noncompliance**

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

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

The Director shall be notified as soon as the permittee knows or has reason to believe:

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

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

9. **Duty to Provide Information**

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

10. **Duty to Reapply**

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The complete application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be implemented through procedures outlined by APC&EC Rule 6.

11. **Signatory Requirements**

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

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

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

   (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation.
   (b) The manager of one or more manufacturing, production, or operation facilities, provided: the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship: by a general partner or proprietor, respectively.

3. For a municipality, State, Federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(a) The chief executive officer of the agency.
(b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

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

1. The authorization is made in writing by a person described above.
2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).
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 APC&EC Rule 6, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Environmental Quality. As required by the Regulations, the name and address of any permit applicant or permittee, permit applications, permits, and effluent data shall not be considered confidential.

13. **Penalties for Falsification of Reports**

The Arkansas Air and Water Pollution Control Act provides that any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this permit shall be subject to civil penalties specified in Part III.A.2 and/or criminal penalties under the authority of the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

14. **Other Information**

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

PART IV
DEFINITIONS

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

1. **"7-Day Average"** also known as "average weekly," means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. The 7-Day Average for Fecal Coliform Bacteria (FCB) or E-Coli is the geometric mean of the "daily discharges" of all effluent samples collected during a calendar week in colonies per 100 ml.
2. **"Act"** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
3. **"Administrator"** means the Administrator of the U.S. Environmental Protection Agency.
4. **"APC&EC"** means the Arkansas Pollution Control and Ecology Commission.
5. **"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.
6. **"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 (APC&EC) Rule 2, as amended.
7. **"Best Management Practices (BMPs)"** are activities, practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the State. BMPs also include treatment technologies, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw sewage. BMPs may include structural devices or nonstructural practices.
8. **"Bypass"** means the intentional diversion of waste streams from any portion of a treatment facility, as defined at 40 CFR Part 122.41(m)(1)(i).
9. **"Composite sample"** is a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of 4 effluent portions collected at equal time intervals (but not closer than one hour apart) during operational hours, within the 24-hour period, and combined proportional to flow or a sample collected at more frequent intervals proportional to flow over the 24-hour period.
10. **"CV"** means coefficient of variation.
11. **"Daily Discharge"** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.
    A. **Mass Calculations:** For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of pollutant discharged over the sampling day.
    B. **Concentration Calculations:** For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

12. **"Daily Maximum"** discharge limitation means the highest allowable "daily discharge" during the calendar month.
13. **"Director"** means the Director of the Division of Environmental Quality.
14. **"Dissolved oxygen limit"** shall be defined as follows:
    A. When limited in the permit as a minimum monthly average, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month.
    B. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
15. **"Division"** means the Division of Environmental Quality (**DEQ**).
16. **"*E. coli*"** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For *E. coli*, report the Daily Maximum as the highest "daily discharge" during the calendar month and the Monthly Average as the geometric mean of all "daily discharges" within a calendar month, in colonies per 100 ml.
17. **"Fecal Coliform Bacteria (FCB)"** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For FCB, report the Daily Maximum as the highest "daily discharge" during the calendar month and the Monthly Average as the geometric mean of all "daily discharges" within a calendar month, in colonies per 100 ml.
18. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
19. **"Industrial User"** means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a publicly owned treatment works (POTW).
20. **"Instantaneous flow measurement"** means the flow measured during the minimum time required for the flow-measuring device or method to produce a result in that instance. To the extent practical, instantaneous flow measurements coincide with the collection of any grab samples required for the same sampling period so that together the samples and flow are representative of the discharge during that sampling period.
21. **"Instantaneous Maximum"** when limited in the permit as an instantaneous maximum value, shall mean that no value measured during the reporting period may fall above the stated value.
22. **"Instantaneous Minimum"** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
23. **"Monitoring and Reporting"**
    When a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date. Where the monitoring requirement for an effluent characteristic is monthly or more frequently, the Discharge Monitoring Report (DMR) shall be submitted by the 25th of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Quarterly, Semi-Annual, Annual, or Yearly, the DMR shall be submitted by the 25th of the month following the monitoring period end date.
    A. **MONTHLY:**
    is defined as a calendar month or any portion of a calendar month for monitoring requirement frequency of once/month or more frequently.
    B. **BI-MONTHLY:**
    is defined as two (2) calendar months or any portion of 2 calendar months for monitoring requirement frequency of once/2 months or more frequently.

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

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

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

24. **"Monthly Average"** means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. For Fecal Coliform Bacteria (FCB) or *E. coli*, report the Monthly Average as the geometric mean of all "daily discharges" within a calendar month.
25. **"National Pollutant Discharge Elimination System (NPDES)"** 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.
26. "**NOEC**" means No Observed Effect Concentration.
27. **"PMSD"** means Percent Minimum Significant Difference.
28. **"POTW"** means Publicly Owned Treatment Works;
29. **"Reduction of $CBOD_5$/BOD_5 and TSS in mg/l Formula"**
    [(Influent – Effluent) / Influent] × 100
30. **"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.
31. **"Sewage sludge"** means the solids, residues, and precipitate separated from or created in sewage by the unit processes at a POTW. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and stormwater runoff that are discharged to or otherwise enter a POTW.
32. **"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.

33. **Units of Measure:**
    "MGD" shall mean million gallons per day.
    "mg/l" shall mean milligrams per liter or parts per million (ppm).
    "µg/l" shall mean micrograms per liter or parts per billion (ppb).
    "cfs" shall mean cubic feet per second.
    "ppm" shall mean parts per million.
    "s.u." shall mean standard units.
34. **"Upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. Any upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless of improper operations.
35. **"Visible sheen"** means the presence of a film or sheen upon or a discoloration of the surface of the discharge. A sheen can also be from a thin glistening layer of oil on the surface of the discharge.
36. **"Weekday"** means Monday – Friday.

Final Fact Sheet

This Fact Sheet is for information and justification of the permit requirements only. Please note that it is not enforceable. This permitting decision is for the construction of discharge Permit Number AR0022063 with Arkansas Department of Energy and Environment – Division of Environmental Quality (DEQ) Arkansas Facility Identification Number (AFIN) 72-00003 to discharge to Waters of the State.

1. **PERMITTING AUTHORITY**

The issuing office is:

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

2. **APPLICANT**

The applicant's mailing address is:

Springdale Water and Sewer Commission
Springdale Wastewater Treatment Facilities
P.O. Box 769
Springdale, AR 72765-0769

The facility address is:

Springdale Water and Sewer Commission
Springdale Wastewater Treatment Facilities
2910 Silent Grove Road
Springdale, AR

3. **PREPARED BY**

The permit was prepared by:

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4. **PERMIT ACTIVITY**

Previous Permit Effective Date:	April 1, 2004
Previous Permit Expiration Date:	March 31, 2009

The permittee submitted a permit renewal application on September 22, 2008. After submittal of the renewal application, the renewal process was placed on hold for this facility. The permit

would remain on hold until an agreement could be reached between regulatory agencies of both the State of Arkansas and the State of Oklahoma regarding a way forward to permit total phosphorus effluent limits for existing dischargers in the Illinois River Watershed. Since that time, an updated Memorandum of Agreement concerning Total Phosphorus discharges in Northwest Arkansas has been signed. Subsequently, DEQ requested submittal of updated application information. This information was submitted on April 30, 2020.

The discharge permit is reissued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 122.46(a).

DOCUMENT ABBREVIATIONS

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

APC&EC - Arkansas Pollution Control and Ecology Commission
BAT - best available technology economically achievable
BCT - best conventional pollutant control technology
BMP - best management practice
BOD_5 - five-day biochemical oxygen demand
BPJ - best professional judgment
BPT - best practicable control technology currently available
$CBOD_5$ - carbonaceous biochemical oxygen demand
CD - critical dilution
CFR - Code of Federal Regulations
cfs - cubic feet per second
COD - chemical oxygen demand
COE - United States Corp of Engineers
CPP - continuing planning process
CWA - Clean Water Act
DMR - discharge monitoring report
DO - dissolved oxygen
ELG - effluent limitation guidelines
EPA - United States Environmental Protection Agency
ESA - Endangered Species Act
FCB - fecal coliform bacteria
gpm - gallons per minute
MGD - million gallons per day
MQL - minimum quantification level
NAICS - North American Industry Classification System
NH_3-N - ammonia nitrogen
$NO_3 + NO_2$-N - nitrate + nitrite nitrogen
NPDES - National Pollutant Discharge Elimination System
O&G - oil and grease
Rule 2 - APC&EC Rule No. 2
Rule 6 - APC&EC Rule No. 6
Rule 8 - APC&EC Rule No. 8

Rule 9 - APC&EC Rule No. 9
RP - reasonable potential
SIC - standard industrial classification
SSO - sanitary sewer overflow
TDS - total dissolved solids
TMDL - total maximum daily load
TP - total phosphorus
TRC - total residual chlorine
TSS - total suspended solids
UAA - use attainability analysis
USF&WS - United States Fish and Wildlife Service
USGS - United States Geological Survey
WET - whole effluent toxicity
WQMP - water quality management plan
WQS - Water Quality standards
WWTP - wastewater treatment plant

Compliance and Enforcement History:

The compliance and enforcement history for this facility can be reviewed by using the following web link:

http://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0022063_Compliance%20Review_20200513.pdf

5. SIGNIFICANT CHANGES FROM THE PREVIOUSLY ISSUED PERMIT

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

1. The monthly total number of Sanitary Sewer Overflows (SSOs) and the monthly total volume of SSOs must be reported on the Discharge Monitoring Reports.
2. The permittee is now required to obtain separate permit coverage for land application of sludge as all references to sludge disposal have been removed from Part II (formerly Part III) of the permit.
3. Part III.C.5 of the permit now requires that DMRs be submitted electronically via NetDMR.
4. The 24-hour composite sample types have been changed to composite. See Item No. 15 of this Fact Sheet for additional information.
5. The description of the monitoring location has been modified.
6. The TRC limit has decreased. Interim limits and a schedule of compliance for the more stringent limit has been included in the permit. See Item Nos. 12.A and 16 of this Fact Sheet for additional information.
7. Parts III (formerly Part II) and IV have been updated.
8. The required class of the licensed operator is now specified in Part II (formerly Part III) of the permit.

9. The WET testing requirements have been updated.
10. The decimal places for $CBOD_5$, TSS, NH_3-N and the monthly average mass limit for total phosphorus have been modified to comply with the new OWQ guidance.
11. The NH_3-N limits for April have changed to meet instream toxicity criteria.
12. The April FCB limit has been corrected. See Item Nos. 12.A and 12.B for additional information.
13. The year-round instantaneous minimum DO limit was revised from 6.0 mg/L to 6.5 mg/L based on updated model.
14. The seasonal monthly average minimum DO limits have been removed based on updated model.
15. Part II of the permit (formerly Part III) has been revised to include monitoring frequency reduction, a total phosphorus condition, revised SSO reporting language, and a BMP condition.
16. A condition allowing effluent blending to occur due to peak flow conditions has been added to Part II of the permit as Condition No. 12.
17. A 7-day average Total Phosphorus concentration limit has been added to the permit. See Item No. 12.A of this Fact Sheet for additional information.

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION

The outfall is located at the following coordinates based on Google Earth using WGS84:

Latitude: 36° 12’ 49” N; Longitude: 94° 09’ 48” W

The receiving waters named:

Spring Creek, then to Osage Creek, then to Illinois River in Segment 3J of the Arkansas River Basin. The receiving stream with USGS Hydrologic Unit Code (H.U.C.) of 11110103 and reach #830 (of Osage Creek) is a Water of the State classified for primary and secondary contact recreation, raw water source for domestic (public and private), industrial, and agricultural water supplies; propagation of desirable species of fish and other aquatic life; and other compatible uses.

7. 303(d) LIST, TOTAL MAXIMUM DAILY LOADS, ENDANGERED SPECIES, AND ANTI-DEGRADATION CONSIDERATIONS

A. 303(d) List

The receiving stream is not on the 2018 303(d) list.

B. Applicable Total Maximum Daily Loads (TMDLs)

There are no TMDLs which are applicable to this facility.

C. **Endangered Species**

No comments on the application were received from the USF&WS. The draft permit and Fact Sheet were sent to the USF&WS for their review.

The Arkansas Department of Parks, Heritage, and Tourism stated that the following species of concern are known to occur at or within 5 miles downstream of the outfall:

Etheostoma mihileze, sunburst darter – state concern
Faxonius nana, midget crayfish – state concern

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

D. **Anti-Degradation**

The limitations and requirements set forth in this permit for discharge into waters of the state are consistent with the Anti-degradation Policy and all other applicable water quality standards found in APC&EC Rule 2.

8. **OUTFALL, TREATMENT PROCESS DESCRIPTION, AND FACILITY CONSTRUCTION**

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

A. Design Flow: 24 MGD

B. Type of Treatment: chain and rake screen, grit and scum removal, primary clarifiers (optional), advanced BNR/extended aeration activated sludge, final clarification, sand filtration, chlorine disinfection, dechlorination with sulfur dioxide, oxygenation, sludge thickening, and sludge dewatering. At the time of permit renewal, the permittee is constructing a sludge drying system.

C. Discharge Description: treated municipal wastewater

D. Facility Status: This facility is classified as a major municipal since the design flow of the facility listed above is greater than 1.0 MGD.

E. Facility Construction: This permit does not authorize or approve the construction or modification of any part of the treatment system or facilities. Approval for such construction must be by permit issued under Rule 6.202.

9. ACTIVITY

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

10. INDUSTRIAL WASTEWATER CONTRIBUTIONS

This facility receives process wastewater from significant industrial users, as defined in 40 CFR §403.3(v). Based on the applicant's effluent compliance history and the type of industrial contributions, standard Pretreatment Program implementation conditions are deemed appropriate at this time.

11. SEWAGE SLUDGE PRACTICES

Sludge is hauled to a landfill permitted to accept such material. Class A sludge, which may be produced after all permitted changes to the sludge drying and processing system have been made, may be disposed of in method allowed under the applicable rules and regulations. Any change to these methods of sludge disposal will require notification of the Division in accordance with Part III of the permit.

12. DEVELOPMENT AND BASIS FOR PERMIT CONDITIONS

The Division of Environmental Quality has determined to issue a permit for the discharge described in the application. Permit requirements are based on federal regulations (40 CFR Parts 122, 124, and Subchapter N), the National Pretreatment Regulation in 40 CFR Part 403 and rules promulgated pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. 8-4-101 et seq.). All of the information contained in the application, including all of the submitted effluent testing data, was reviewed to determine the need for effluent limits and other permit requirements.

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

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

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

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Permit Limit	
	Monthly Avg. mg/L	7-Day Avg. mg/L	Monthly Avg. mg/L	7-Day Avg. mg/L	Monthly Avg. mg/L	7-Day Avg. mg/L	Monthly Avg. mg/L	7-Day Avg. mg/L
$CBOD_5$								
(January - February)	25	38	25	40	25	38	25	38
(March - December)	10	15	25	40	10	15	10	15
TSS								
(January - February)	N/A	N/A	30.0	45.0	30	45	30.0	45.0
(March - December)	N/A	N/A	15.0	22.5	15	23	15.0	22.5
NH_3-N								
(May - October)	1.5	2.3	N/A	N/A	1.5	2.3	1.5	2.3
(November – March)	4.0	6.0	N/A	N/A	4	6	4.0	6.0
(April)	1.6	3.9	N/A	N/A	4	6	1.6	3.9
DO (year-round)	6.5 (Inst. Min.)		N/A		6.0 (Inst. Min.)		6.5 (Inst. Min.)	
(January - February)	6.5 (Inst. Min.)		N/A		7.5 (Monthly Avg. Min.)		6.5 (Inst. Min.)	
(March, April, November, & December)	6.5 (Inst. Min.)		N/A		9.5 (Monthly Avg. Min.)		6.5 (Inst. Min.)	
(May – October)	6.5 (Inst. Min.)		N/A		7.9 (Monthly Avg. Min.)		6.5 (Inst. Min.)	
FCB (col/100 ml)								
(May – September)	200	400	N/A	N/A	200	400	200	400
(October – March)	1000	2000	N/A	N/A	1000	2000	1000	2000
(April)	1000	2000	N/A	N/A	200	400	1000	2000
TRC (Inst. Max)	0.011		N/A		<0.1		0.011	
TP	N/A	N/A	1.0	1.5	1	N/A	1.0	1.5
$NO_3 + NO_2$ - N	N/A	N/A	Report	Report	N/A	N/A	Report	Report
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.	

A. **<u>Justification for Limitations and Conditions of the Permit</u>**

Parameter	Water Quality or Technology	Justification
$CBOD_5$	Water Quality	Water Quality Model dated October 23, 2020, 40 CFR Part 133.102(a), CWA § 402(o), and previous permit

Parameter	Water Quality or Technology	Justification
TSS	Technology	January-February: 40 CFR Part 133.102(b), 40 CFR Part 122.44(l), and previous permit March-December: Water Quality Model dated October 23, 2020, CWA § 402(o), and previous permit
NH_3-N	Water Quality	April limits: Rule 2.512 May-March limits: Water Quality Model dated October 23, 2020, CWA § 402(o), and previous permit
DO	Water Quality	Rule 2.505, Water Quality Model dated October 23, 2020, CWA § 402(o), and previous permit
FCB	Water Quality	Rule 2.507, CWA § 402(o), and previous permit
TRC	Water Quality	Rule 2.409, CWA § 402(o), and previous permit
TP	Technology	Rule 2.509, MOA between Arkansas and Oklahoma, 40 CFR 122.44(l), and previous permit
$NO_3 + NO_2$ - N	Technology	CPP
pH	Water Quality	Rule 2.504, CWA § 402(o), and previous permit

TSS

The 7-day average concentration during the months of March through December has changed to correspond with the OWQ's significant digits policy.

NH_3-N

The limits for the month of April have been revised to reflect the toxicity standards contained in Rule 2.512 as those limits are more stringent then the limits based on maintaining the DO standard in the receiving stream. The limits for May - March are remaining unchanged as they are more stringent than the limits based on the toxicity criteria.

DO

Year-round minimum required DO limits are replacing the seasonal limits. The water quality model has been updated and it has been determined that the proposed DO requirements are protective of the water quality of the receiving stream.

FCB

The previous permit included the effluent limitations for FCB expressed as 200/400 (Monthly Average/7-Day Average) colonies/100mL during the month of April. These limits are now expressed as 1000/2000 (Monthly Average/7-Day Average) colonies/100mL during the month of April based on Rule 2.507.

TRC

EPA considers TRC concentrations at the edge of the mixing zone higher than 0.011 mg/L (Chronic Criteria) to be toxic to aquatic organisms. At the time of the last permit renewal, it was the OWQ's practice to use the detection level as the permit limit for TRC even though it is higher than the EPA criteria. This is no longer the OWQ's practice. The limit will now be based on the criteria itself.

The critical dilution for this facility is over 99% as can be seen in the WET testing section, Item No. 13, of this Fact Sheet. Therefore, the permit limit will be equal to the criteria of 0.011 mg/L. A schedule of compliance has not been included for the more stringent limit since recent data submitted on the DMRs from the permittee show that they are already in compliance with the new limit.

The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC shall be measured within fifteen (15) minutes of sampling. To demonstrate compliance with the TRC limit, the permittee must determine the effluent concentration by using any EPA approved test method established in 40 CFR Part 136 capable of meeting a detection level of 0.033 mg/L or lower. If TRC is not detected at the required detection level (i.e., lab result is "ND"), the permittee may report a value of "0" on the Discharge Monitoring Report (DMR) thereby demonstrating compliance with the limit of 0.011 mg/L. Please note that if the required detection level is not met, TRC must be reported at the detection level achieved.

TP

Nutrients are the primary causes of cultural eutrophication (i.e., nutrient enrichment due to human activities) in surface waters. The most recognizable manifestations of this eutrophication are algal blooms that occur during the summer. Chronic symptoms of over-enrichment include low dissolved oxygen, fish kills, murky water, and depletion of desirable flora and fauna. In addition, the increase in algae and turbidity increases the need to chlorinate drinking water, which, in turn, leads to higher levels of disinfection by-products that have been shown to increase the risk of cancer. Excessive amounts of nutrients can also stimulate the activity of microbes, such as *Pfiesteria*, which may be harmful to human health.

Water quality criteria for aquatic life use protection are defined by three components: magnitude (value), duration (averaging period), and frequency (number of allowable excursions). All three components must be considered when evaluating attainment of the criteria. Because phosphorus is a conventional, non-toxic pollutant, its impacts are integrated throughout the aquatic system over time. Therefore, an average 6-month concentration target was chosen. Based on the Memorandum of Agreement (MOA) between the States of Arkansas and Oklahoma, the total phosphorus loading will not be increased beyond the permitted design flow, and the renewal will include a permit condition requiring an analysis of potential phosphorus concentration reduction be completed during the term of the renewed permit.

A long term average of 1 mg/L for this facility will be continued from the previous permit as allowed by the MOA. The averaging period has changed from a monthly average to a six-month average. A 7-day average limit of 1.5 mg/L has been added to the permit. 40 CFR 122.45(d)(2) requires that effluent limitations in NPDES Permits for POTWs, unless impracticable, be expressed in terms of monthly average and 7-day average.

It is important to note that although the monthly average mass loading is calculated as a steady-state load, the WWTP can accommodate higher flows during wet-weather periods. As a result, actual daily mass loads that occur during wet-weather periods may be above the monthly average mass limit even though the effluent concentration may be less than the 1.5 mg/L 7-day average limit.

B. Anti-backsliding

The permit is consistent with the requirements to meet Anti-backsliding provisions of the Clean Water Act (CWA), Section 402(o) [40 CFR Part 122.44(l)]. The final effluent limitations for reissuance permits must be as stringent as those in the previous permit, unless the less stringent limitations can be justified using exceptions listed in CWA 402(o)(2), CWA 303(d)(4), or 40 CFR Part 122.44(l)(2)(i).

The permit meets or exceeds the requirements of the previous permit, except for FCB and DO. The months for the seasonal FCB limits in the previous permit were not consistent with Rule 2.507. This permit allows relaxation in the secondary contact season limitations for the month of April to match the requirements of Rule 2.507. This relaxation in limitations does not constitute backsliding, based on CWA Sections 402(o) and 303(d)(4). The revised limitations continue to maintain the state anti-degradation policy by meeting the primary and secondary contact season standards of Reg. 2.507, and maintaining the existing uses of the receiving stream.

The DO requirements, which are less stringent than those in the previous permit, have been based on an updated water quality model. The change is allowed under the anti-backsliding regulations because it is based on updated modeling procedures and new information.

C. Limits Calculations

1. Mass Limits:

   In accordance with 40 CFR Part 122.45(f)(1), all pollutants limited in permits shall have limitations expressed in terms of mass if feasible. 40 CFR Part 122.45(f)(2) allows for pollutants which are limited in terms of mass to also be limited in terms of other units of measurement.

   The calculation of the loadings (lbs per day) uses a design flow of 24 MGD and the following equation:

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

2. 7-Day Average Limits:

   The 7-day average limits for $CBOD_5$, TSS, NH_3-N (May through March), and TP are based on Section 5.4.2 of the Technical Support Document for Water Quality-based Toxics Control:

   7-day average limits = monthly average limits × 1.5

   The 7-day average NH_3-N limits for the month of April are based on Rule 2.512.

   The 7-Day average limits for FCB are based on Rule 2.507.

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

The 208 Plan, developed by the DEQ under provisions of Section 208 of the federal Clean Water Act, is a comprehensive program to work toward achieving federal water goals in Arkansas. The initial 208 Plan, adopted in 1979, provides for annual updates, but can be revised more often if necessary. The 208 Plan is being updated to include the following changes:

1. A year-round instantaneous maximum TRC limit of 0.011 mg/L is being added.
2. The existing TP concentration limit of 1.0 mg/L from the previous permit is being added to the 208 Plan and will be specified as a 6-month rolling average.
3. The monthly average NH3-N limit for April is being revised from 4 mg/L to 1.6 mg/L to comply with toxicity criteria.
4. The year-round instantaneous minimum DO limit was changed from 6.0 mg/L to 6.5 mg/L based on updated model.

E. **Priority Pollutant Scan (PPS)**

DEQ has reviewed and evaluated the effluent in accordance with the potential toxicity of each analyzed pollutant using the procedures outlined in the Continuing Planning Process (CPP).

The concentration of each pollutant after mixing with the receiving stream was compared to the applicable water quality standards as established in the Arkansas Water Quality Standards (AWQS), Rule 2 (Rule 2.508) and criteria obtained from the "Quality Criteria for Water, 1986 (Gold Book)."

Under Federal Regulation 40 CFR Part 122.44(d), as adopted by Rule 6, if a discharge poses the reasonable potential to cause or contribute to an exceedance above a water quality standard, the permit must contain an effluent limitation for that pollutant. Effluent limitations for the toxicants listed below have been derived in a manner consistent with the Technical Support Document (TSD) for Water Quality-based Toxics Control (EPA, March 1991), the CPP, and 40 CFR Part 122.45(c).

The following items were used in calculations:

Parameter	Value	Source
Discharge Flow = Q	24 MGD = 37.13 cfs	Application
critical flow, 7Q10	0.11 cfs	USGS
LTA Background Flow	0.33 cfs	Calculated per TDS (3*7Q10)
TSS	2.5 mg/L	CPP, Attachment V
Hardness as $CaCO_3$	148 mg/L	CPP, Attachment VI
pH	7 s.u.	Neutral pH since no upstream data is available
Q_b background flow, Mixing zone flow for chronic toxicity	0.67	Rule 2.508 and CPP-Appendix D
Q_b background flow, ZID flow for acute toxicity	0.33	Rule 2.508 and CPP-Appendix D

The following pollutants were reported above detection levels. The reported values are the geometric mean of 11 data points.

Pollutant	Concentration Reported, µg/L	MQL, µg/L
Total Rec. Arsenic	0.46	0.5
Total Rec. Copper	5.16	0.5
Total Rec. Mercury	0.005171	0.005
Total Rec. Nickel	3.24	0.5
Total Rec. Zinc	35.26	20
Total Phenols	11.82	5

Instream Waste Concentrations (IWCs) were calculated in the manner described in Appendix D of the CPP and compared to the applicable Criteria. The following tables summarize the results of the analysis. The complete evaluation can be viewed on the Division's website at the following address:

http://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0022063_PPS_20200520.pdf

1. **Aquatic Toxicity Evaluation**

a. Acute Criteria Evaluation

Pollutant	Concentration Reported (C_e) µg/L	$C_e \times 2.13$[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
			Acute, µg/L	Acute, µg/L	
Total Rec. Copper	5.16	10.98	10.98	57.11	No
Total Rec. Mercury	0.005171	0.011014	0.011	7.24	No
Total Rec. Nickel	3.24	6.90	6.89	3405.03	No
Total Rec. Zinc	35.26	75.10	75.03	422.06	No

[1] Statistical ratio used to estimate the 95th percentile using a single effluent concentration or the geometric mean of a dataset.
[2] Criteria are from Rule 2.508 unless otherwise specified.

b. Chronic Criteria Evaluation

Pollutant	Concentration Reported (C_e) µg/L	$C_e \times 2.13$[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
			Chronic, µg/L	Chronic, µg/L	
Total Rec. Copper	5.16	10.98	10.97	36.81	No
Total Rec. Mercury	0.005171	0.011014	0.01099	0.012	No
Total Rec. Nickel	3.24	6.90	6.89	378.16	No
Total Rec. Zinc	35.26	75.10	74.96	385.40	No

[1] Statistical ratio used to estimate the 95th percentile using a single effluent concentration or the geometric mean of a dataset.
[2] Criteria are from Rule 2.508 unless otherwise specified.

2. **Human Health (Bioaccumulation) Evaluation**

Pollutant	Concentration Reported (C_e) µg/L	$C_e \times 2.13$[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
Total Rec. Arsenic	0.46	0.98	0.97	1.4[3]	No
Total Phenols	11.82	25.17	24.98	N/A	No

[1] Statistical ratio used to estimate the 95th percentile using a single effluent concentration or the geometric mean of a dataset.
[2] Criteria are from Rule 2.508 unless otherwise specified.
[3] Adapted from "National Recommended Water Quality Criteria: 2002 – Human Health Criteria Calculation Matrix", EPA. The respective WQC from the noted reference are Consumption of Organism Only values. The values from the reference are for a lifetime risk factor of 10^{-6}. These values have been multiplied by 10 to correspond to human health criteria lifetime risk factor of 10^{-5} as stated in Rule 2.508.

DEQ has determined from the submitted information that the discharge does not pose the reasonable potential to cause or contribute to an exceedance above a listed criteria.

13. WHOLE EFFLUENT TOXICITY

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

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

TOXICITY TESTS	FREQUENCY
Chronic WET	once/quarter

Requirements for measurement frequency are based on the CPP.

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

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

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

Qd = Design flow = 24 MGD = 37.13 cfs
7Q10 = 0.11 cfs
Qb = Background flow = 0.67 × 7Q10 = 0.0737 cfs
CD = (37.13) / (37.13 +0.0737) × 100 = 99.8% round to 100%

Toxicity tests shall be performed in accordance with protocols described in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-91/002, July 1994. A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are 32%, 42%, 56%, 75%, and 100% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 100% effluent. The requirement for chronic WET tests is based on the magnitude of the facility's discharge with respect to receiving stream flow.

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

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

This permit may be reopened to require further WET testing studies, Toxicity Reduction Evaluation (TRE) and/or effluent limits if WET testing data submitted to the Division shows toxicity in the permittee's discharge. Modification or revocation of this permit is subject to the provisions of 40 CFR 122.62, as adopted by reference in APC&EC Rule 6. Increased or intensified toxicity testing may also be required in accordance with Section 308 of the Clean Water Act and Section 8-4-201 of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

Administrative Records

The following information summarizes toxicity tests submitted by the permittee during the term of the current permit at Outfall 001.

Permit Number:	AR0022063	AFIN:	72-00003	Outfall Number:	001
Date of Review:	5/28/2020	Reviewer:	M. Barnett		
Facility Name:	City of Springdale – Springdale Wastewater Treatment Facilities				
Previous Dilution series:	31, 41, 55, 73, 97	Proposed Dilution Series:	32, 42, 56, 75, 100		
Previous Critical Dilution:	97	Proposed Critical Dilution:	100		
Previous TRE activities:	None				

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

TEST DATA SUMMARY

	Vertebrate (*Pimephales promelas*)		Invertebrate (*Ceriodaphnia dubia*)	
TEST DATE	Lethal NOEC	Sub-Lethal NOEC	Lethal NOEC	Sub-Lethal NOEC
9/30/2015	97	97	97	97
12/31/2015	97	97	97	97
3/31/2016	97	97	97	97
3/31/2016	97	97	97	97
6/30/2016	97	97	97	97
12/31/2016	97	97	97	97
3/31/2017	97	97	97	97
9/30/2017	97	97	97	97
12/31/2017	97	97	97	97
3/31/2018	97	97	97	97
9/30/2018	97	97	97	97
12/31/2018	97	97	97	97
3/31/2019	97	97	97	97
6/30/2019	97	97	97	97
9/30/2019	97	97	97	97
12/31/2019	97	97	97	97
3/31/2020	97	97	97	97
6/30/2020	97	97	97	97

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	**Vertebrate Sub-lethal**	**Invertebrate Lethal**	**Invertebrate Sub-Lethal**
Min NOEC Observed	97	97	97	97
TU at Min Observed	1.03	1.03	1.03	1.03
Count	18	18	18	18
Failure Count	0	0	0	0
Mean	1.031	1.031	1.031	1.031
Std. Dev.	0.000	0.000	0.000	0.000
CV	0	0	0	0
RPMF	0	0	0	0
Reasonable Potential	0.000	0.000	0.000	0.000
100/Critical dilution	1.000	1.000	1.000	1.000
Does Reasonable Potential Exist	No	No	No	No

PERMIT ACTION

P. promelas Chronic - monitoring
C. dubia Chronic - monitoring

14. STORMWATER REQUIREMENTS

The federal regulations at 40 CFR Part 122.26(b)(14)(ix) require major municipal dischargers to have NPDES permit coverage for stormwater discharges from the facility. These requirements include the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to control the quality of stormwater discharges from the facility. In lieu of the development of a SWPPP, the facility may obtain a "No Exposure" Exclusion in accordance with 40 CFR Part 122.26(g) if several conditions can be certified. This facility was issued a "No Exposure" Exclusion under NPDES Tracking number ARR00C376.

15. SAMPLE TYPE AND FREQUENCY

Requirements for sampling frequency have been based on the current discharge permit. The 24-hr composite sample type has been changed to composite in order to allow the permittee flexibility in how the required samples are collected.

The sampling type and frequency requirements for Nitrates plus Nitrites as Nitrogen have been based on the requirements for Total Phosphorus as both parameters are nutrients.

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Flow	once/day	totalizing meter	once/day	totalizing meter
$CBOD_5$				
(January - February)	once/week	24-hr composite	once/week	composite
(March - December)	once/week	24-hr composite	once/week	composite
TSS				
(January - February)	once/week	24-hr composite	once/week	composite
(March - December)	once/week	24-hr composite	once/week	composite
NH_3-N				
(May - October)	once/day	24-hr composite	once/day	composite
(November – March)	once/day	24-hr composite	once/day	composite
(April)	once/day	24-hr composite	once/day	composite
DO				
(January - February)	four/week	grab	four/week	grab
(March, April, November, & December)	four/week	grab	four/week	grab
(May – October)	four/week	grab	four/week	grab
FCB (col/100 mL)				
(May – September)	once/week	grab	once/week	grab
(October – April)	once/week	grab	once/week	grab

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
TRC	once/week	grab	once/week	grab
TP	twice/month	24-hr composite	twice/month	composite
$NO_3 + NO_2$ - N	N/A	N/A	twice/month	composite
pH	six/week	grab	six/week	grab

16. **PERMIT COMPLIANCE SCHEDULE**

The permit compliance schedule contains dates for submittal of a phosphorus reduction study and submittal of pretreatment requirements.

A schedule of compliance for the more stringent TRC limit has been included in the permit. At this time, the permittee cannot verify that they will be able to comply fully with the more stringent limit. Therefore, as allowed in Rule 2.104, the DEQ is exercising its discretion and allowing the permittee three years to come into compliance with the more stringent TRC limit.

A schedule of compliance for the more stringent NH_3-N limits for the month of April has not been included in the permit. The permittee has already demonstrated that they are capable of meeting the more stringent limits.

17. **MONITORING AND REPORTING**

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

18. **SOURCES**

The following sources were used to draft the permit:

A. Application No. AR0022063 received September 22, 2008, and updated April 30, 2020.
B. Arkansas Water Quality Management Plan (WQMP).
C. APC&EC Rule 2.
D. APC&EC Rule 3.
E. APC&EC Rule 6, which incorporates by reference certain federal regulations included in Title 40 of the Code of Federal Regulations at Rule 6.104.
F. 40 CFR Parts 122, 125, 133, and 403.
G. Discharge permit file AR0022063.
H. Discharge Monitoring Reports (DMRs).
I. "2018 Integrated Water Quality Monitoring and Assessment Report," DEQ.
J. "2018 List of Impaired Waterbodies (303(d) List)," DEQ, May 2020.
K. USGS StreamStats.
L. Continuing Planning Process (CPP).
M. Technical Support Document for Water Quality-based Toxic Control.

N. Inspection Report dated November 25, 2019.
O. Compliance Review Memo from Gavin Gray to Loretta Carstens, P.E. dated May 13, 2020.
P. Water Quality Model dated August 5, 2020.
Q. "Memorandum of Agreement by and between the Oklahoma Secretary of Energy and Environment, the Oklahoma Secretary of Agriculture, the Arkansas Department of Environmental Quality, and the Arkansas Natural Resources Commission, or Successor Agencies", effective on November 14, 2018.

19. PUBLIC NOTICE

The public notice of the draft permit was published for public comment on February 14, 2021. The last day of the comment period was thirty (30) days after the publication date. A summary of the comments received by the DEQ during the public comment period and response to the comments are included with this permit decision.

Copies of the draft permit and public notice were sent via email to the Corps of Engineers; the Regional Director of the U.S. Fish and Wildlife Service; the Department of Parks, Heritage, and Tourism; the EPA; and the Arkansas Department of Health.

20. PERMIT FEE

In accordance with Rule 9.403(B), the annual fee for the permit is calculated from the Design Flow (Q, in MGD) as follows:

Fee = \$5,000 + (900 × (Q-1)) = \$5,000 + (900 × (24 - 1)) = \$25,700

21. POINT OF CONTACT

For additional information, contact:

Loretta Carstens, P.E.
Permits Branch, Office of Water Quality
Division of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317
Telephone: (501) 682-0612

ATTACHMENT I
MONITORING RESULTS FOR ANNUAL PRETREATMENT REPORT
REPORTING YEAR: _____ / _____ / _____ TO _____ / _____ / _____
PERMITTEE NAME: _____ NPDES PERMIT NO. _____
AVERAGE POTW FLOW: _____MGD PERCENT INDUSTRIAL FLOW: _____%

POLLUTANT (Total)	MAHC[2] (µg/L)	INFLUENT DATES SAMPLED (µg/L) once/quarter				WQ level / limit[2] (µg/L)	EFFLUENT DATES SAMPLED (µg/L) once/quarter				LABORATORY ANALYSIS		
		Date	Date	Date	Date		Date	Date	Date	Date	EPA MQL[1] (µg/L)	EPA Method Used[1]	Detection Level Achieved (µg/L)
Antimony	N/A					N/A					60		
Arsenic											0.5		
Beryllium											0.5		
Cadmium											0.5		
Chromium											10		
Copper											0.5		
Lead											0.5		
Mercury											0.005		
Nickel											0.5		
Selenium											5		
Silver											0.5		
Thallium	N/A					N/A					0.5		
Zinc											20		
Cyanide											10		
Phenols	N/A					N/A					5		
Molybdenum						N/A							
Flow, MGD	N/A					N/A							
[3]													
[3]													
[3]													
[3]													
[3]													

POLLUTANT (Total)	MAHC[2] (µg/L)	INFLUENT DATES SAMPLED (µg/L) once/quarter				WQ level / limit[2] (µg/L)	EFFLUENT DATES SAMPLED (µg/L) once/quarter				LABORATORY ANALYSIS		
		Date	Date	Date	Date		Date	Date	Date	Date	EPA MQL[1] (µg/L)	EPA Method Used[1]	Detection Level Achieved (µg/L)
[3]											-		
[3]													
[3]													
[3]													
[3]													
[3]													
[3]													
[3]													
[3]													
[3]													
[3]													
[3]													
[3]													
[3]													
[3]													

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

[2] This value was calculated during the development of technically-based local limits (TBLLs) based on State WQ criteria, EPA guidance, and either DEQ Pretreatment staff Excel spreadsheets or the permittee's consultant with concurrence from DEQ Pretreatment staff.

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

MAHC - Maximum Allowable Headworks Concentration

WQ - "Water Quality Levels not to exceed" OR actual permit limit.

ATTACHMENT II
PRETREATMENT PROGRAM STATUS REPORT
UPDATED SIGNIFICANT INDUSTRIAL USERS LIST

Industrial User Name	SIC/NAICS Code	40 CFR XXX or N/A	Control Document		New User	Times Inspected	Times Sampled	Compliance Status **(N/A, C, NC, or SNC)**				**Permit Limits** (denote parameter violated & number of times)
								Reports				
			Y/N	Last Action				BMR	90-day Compliance	Semi Annual	Self Monitoring	

Include NAICS code(s)
3rd column – include the CFR # only if the Category has Pretreatment Standards (numeric or narrative)
Please footnote N/A reason

ATTACHMENT III
SIGNIFICANT NON-COMPLIANT (SNC) INDUSTRIES - ENFORCEMENT ACTIONS TAKEN

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

ATTACHMENT IV
PRETREATMENT PERFORMANCE SUMMARY (PPS)

NOTE: All questions refer to the Industrial Pretreatment Program as approved by the DEQ. The permittee should not answer the questions based on changes made to the Approved Program without Division Authorization.

I. General Information

Control Authority Name: _____

Mailing Address: _____

City: _____ State / Zip Code: _____

Pretreatment Contact: _____ Title: _____

Contact Telephone Number: _____

NPDES Permit Number(s): _____

Reporting Period: _____ _____
(Beginning month, day, and year) (Ending month, day, and year)

Total Number of Categorical IUs: _____

Total Number of Significant Non-categorical IUs: _____

Total Number of Non-significant (yet permitted) IUs: _____

II. Significant Industrial User Compliance

	Significant Industrial Users	
	Categorical	Non-categorical
1) Number of SIUs Submitting BMRs	_____	N/A
Total Number Required	_____	N/A
2) Number of SIUs Submitting 90-day Compliance Reports	_____	N/A
Total Number Required	_____	N/A
3) Number of SIUs Submitting Semiannual Reports	_____	_____
Total Number Required	_____	_____
4) Number of SIUs Meeting Compliance Schedule	_____	_____
Total Number Required to Meet Schedule	_____	_____
5) Number of SIUs in Significant Noncompliance	_____	_____
Total Number of SIUs	_____	_____
6) Rate (%) of Significant Noncompliance for all SIUs (categorical and non-categorical)		_____

III. Compliance Monitoring Program

	Significant Industrial Users	
	Categorical	Non-categorical
1) Number of Control Documents Issued		
Total Number Required		
2) Number of Non-sampling Inspections Conducted		
Total Number Required		
3) Number of Sampling Visits Conducted		
Total Number Required		
4) Number of Facilities Inspected (non-sampling)		
Total Number Required		
5) Number of Facilities Sampled		
Total Number Required		

IV. Enforcement Actions

	Significant Industrial Users	
	Categorical	Non-categorical
1) Number of Compliance Schedules Issued		
Total Number of Schedules Required		
2) Number of Notices of Violation Issued to SIUs		
3) Number of Administrative Orders Issued to SIUs		
4) Number of Civil Suits Filed		
5) Number of Criminal Suits Filed		
6) Number of Significant Violators (attach newspaper publication)		
7) Amount of Penalties (not surcharges) Collected (Total Dollars)	$	$
(Total Number of IUs Assessed)		
8) Other Actions (sewer bans, *etc.*)		

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

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

Authorized Representative: _____ Date: _____

RESPONSE TO COMMENTS
FINAL PERMITTING DECISION

Permit No.: AR0022063

Applicant: Springdale Water Utilities

Prepared by: Loretta Carstens, P.E.

The following are responses to comments received by the Division of Environmental Quality (DEQ) regarding the draft permit number referenced above and are developed in accordance with regulations promulgated at 40 C.F.R. §124.17, Arkansas Pollution Control & Ecology Commission (APC&EC) Rule 8 (Administrative Procedures), and Arkansas Code Annotated (A.C.A.) § 8-4-203(e)(2).

Introduction

The above permit was submitted for public comment on February 14, 2021. The public comment period ended on March 16, 2021.

This document contains a summary of the comments that the DEQ received during the public comment period. A summary of the changes to the NPDES Permit can be found on the last page of this document.

The following people or organizations sent comments to the DEQ during the public notice.

Commenter	Title	Organization
Heath Ward	Executive Director	Springdale Water Utilities
Honorable Stephanie Orman, Mayor	Mayor	City of Bentonville
Rebecca Veiga Nascimento	Environmental Scientist, Water Quality Standards Manager	Oklahoma Water Resources Board
Denise Deason-Toyne	President	Save the Illinois River, Inc.
Patrick Rosch, P.E.	Engineering Manager, Municipal WW Group, Water Division	ODEQ
Cindy Osborne	Data Manager/Environmental Review Coordinator	Arkansas Department of Parks, Heritage, and Tourism

Springdale Water Utilities Comments

Comment 1: Corrections are necessary in Part II, Section 12 on page 19 (Peak Flow Conditions). From operational observations subsequent to installation, it is clear that the flow conditions listed in this section, which were derived from the O&M Manual provided by the engineering firm after construction of the new influent pump station in 2003, are not valid. Flows of 60 MGD or more cannot be pushed through the WWTF using existing pumps and pipes. Furthermore, the rare conditions under which extreme flow clarifiers would be utilized vary depending on not just the flow, but also the duration of a storm event and the settleability characteristics of the facility's mixed liquor at the time. The planned uses of this alternative treatment process are to prevent overflow of untreated wastewater from the headworks of the WWTF during extreme flow events due to limited pumping capacity, and/or to prevent washout of the final clarifiers resulting in loss of biomass and reduced biological treatment capacity when all EQ basins are full and no other storage options are available. The permittee respectfully requests that utilization of the extreme flow clarifiers be allowed according to the best professional judgment of the licensed team of professionals operating the facilities rather than defining those conditions within the permit. Since the entire flow from this alternative treatment process comingles with the discharge from the "normal" treatment process, effluent monitoring includes all treated wastewater discharged from Springdale's WWTF, including that from the extreme flow clarifiers. Springdale Water Utilities has no issues with the reporting conditions as outlined in the draft permit.

Response 1: Conditions under which the emergency clarifiers can be used must be outlined in the permit to regulate the emergency clarifiers' usage since that use will result in a bypass of a portion of the treatment system and that effluent will be blended with fully treated effluent. To clarify that the emergency clarifiers may be used when influent flows are higher than normal due to the length or volume of a storm event, Part II.12 will be revised to read as follows:

> For the purposes of this permit only, extreme flow conditions are defined as flows in excess of the treatment capability of the WWTP in tandem with the EQ basins at capacity as provided by 40 C.F.R. § 122.41(m)(2), i.e., bypass not exceeding limitations. Extreme flow conditions may also be defined as conditions when the settleability of the mixed liquor suspended solids (MLSS) is such that flows must be decreased to allow for sufficient treatment.
>
> During extreme flow conditions, the permittee may route wastewater to the emergency clarifiers after it exits the grit and scum removal system, which is upstream of the influent pump station at the headworks of the WWTP. The wastewater exiting the emergency clarifiers will be blended with wastewater exiting the polishing filters immediately upstream of the disinfection system.
>
> The following conditions must be met during extreme flow conditions that result in the use of the emergency clarifiers:
>
> A. The permittee must submit a written report to the Division within five calendar days of the discontinuance of routing flow to the emergency clarifiers. This report shall include, at a minimum, the following information:

1. An explanation of the extreme flow conditions that justify using the emergency clarifiers;
2. Starting and ending dates and times of the wastewater flow to the emergency clarifiers;
3. Total influent flow;
4. Amount of flow which was routed to the emergency clarifiers;
5. Amount of flow routed to the primary clarifiers; and
6. Observations of environmental impacts, if any, caused by the routing of wastewater flow to the emergency clarifier.

B. The permittee must sample the effluent for compliance with permit limits in accordance with the limits and sampling frequencies set forth in Part IA of this permit.

During each calendar week (Sunday through Saturday), at least one of the required effluent samples for each of the BOD_5, TSS, FCB, TRC, and pH samples shall be taken when discharging wastewater that includes extreme flow wastewater routed to the emergency clarifiers, provided any wastewater was routed to those treatment units during the calendar week. All effluent sample results must be included in the calculation of the monthly average and 7-day average values reported on the DMRs.

It is important to note that any changes to the wastewater treatment system may cause the need to reopen this NPDES permit to modify this condition.

Comment 2: Springdale Water Utilities objects to the addition of a 7-day average Total Phosphorus concentration permit limit of any kind. No 7-day limit was required in the current permit, and it is even less necessary in a permit utilizing a 6-month rolling average concentration limit. Phosphorus concentrations in excess of 100 mg/l are required for any indication of aquatic toxicity (acute or chronic). Compliance with such a standard could not even be determined with the proposed required monitoring frequency of twice per month. Springdale Water Utilities would be more than happy to increase the required monitoring frequency to once per week for Total Phosphorus in lieu of this additional unnecessary limitation. In addition, please note that continuous daily sample collection and analyses (far above and beyond permit requirements) since the introduction of the permit limitation for Total Phosphorus have yielded no exceedances of the permit limit nor would there have been any violations in the last decade or more with a 1.5 mg/l 7 day average limitation. In other words, the objection is not based on an inability to meet the standard.

Response 2: 40 CFR 122.45(d) states: "*Continuous discharges.* For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as:

(1) Maximum daily and average monthly discharge limitations for all dischargers other than publicly owned treatment works; and
(2) Average weekly and average monthly discharge limitations for POTWs."

Refer to Part IV of the final permit. "7-Day Average" also known as "average weekly," means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. If a sample is not required *and* not performed in a particular calendar week, then compliance determination is not required for the pollutant during that calendar week. Inclusion of a 7-day average is not impracticable as further demonstrated by the content of the comment.

Therefore, the final permit will contain a 7-day average concentration limit for Total Phosphorus. More discussion of the importance of the 7-day average TP concentration limit is provided in Response 5.

Comment 3: Springdale Water Utilities respectfully requested that additional comment be allowed if other issues are identified or if comments made by others bring up issues warranting further comment.

Response 3: The public comment process and period are governed by Rule 8 and Arkansas law. The public notice for the draft permit was published on February 14, 2021, and the public comment period expired on March 16, 2021.

City of Bentonville Comments

Comment 4: The City of Bentonville stated that the Total Phosphorus (TP) limits for the Springdale Water Utilities (Springdale) are higher than those for the Northwest Arkansas Conservation Authority (NACA) even though Springdale is only eight (8) miles upstream of NACA. NACA is making reductions in the watershed TP loadings while Springdale is not.

Springdale is applauded for integrating Bethel Heights and removing an environmental setback. While this is an improvement in the watershed, it is not the level of improvement that would be achieved by going to NACA's facility or a facility treating to the same level as NACA. Bethel Heights was a member of the NACA Board and intended to send flow to NACA at some point in the future. In fact, NACA did accept and treat wastewater tanked from Bethel Heights to the NACA facility until Bethel Heights was absorbed into Springdale. Bethel Heights was permitted to discharge six (6) lbs/day of TP. With their flow being diverted to Springdale with a limit of 1.0 mg/l, TP loading is reduced to 0.67 lbs/day based on Bethel Heights permitted flow capacity. While this is a significant reduction, had flow been sent to NACA or a facility with the same treatment requirements, TP loading would be reduced to 0.33 lbs/day at 0.5 mg/l or 0.07 lbs/day at 0.1 mg/l.

One of the main drivers causing failures in Bethel Heights is cost. The cost for small cities like Bethel Heights to connect to NACA, which is elevated due to the extremely low treatment levels NACA was required to go to per their original permit and location, is a prohibitive challenge that limits the potential to divert flows to the NACA facility resulting in unrealized watershed improvements available and initially intended. While Springdale is applauded in their efforts to improve the watershed, Bentonville feels the discrepancy in permit limit issued by DEQ and the

increased costs of treatment to lower levels prohibit or unnecessarily delay the goal of regionalization at lower treatment concentrations and associated load reductions envisioned by the NACA facility and region. Bentonville feels DEQ is fostering the delay in water quality improvements and providing some communities with unfair advantages with these discrepancies in treatment levels for facilities located within the same watershed. All facilities in the same watershed should be held to the same levels to ensure water quality standards are met consistently by all and no one facility or community has a financial or environmental advantage over any other. If certain facilities are required to treat to a lower standard than others, appropriate funding should be provided to cover or forgive disproportionate costs to ensure resulting rate remain competitive and further ensure regional plans and visions can be followed and executed with workable strategies.

If other mechanisms were in place to provide water quality improvements in lieu of plant improvement that lower phosphorus loading, Bentonville would be supportive of varied permit limits provided facilities with higher limits were required by their respective permits to use such mechanisms and provide data describing and supporting measurable improvements in the watershed to show the higher discharge limit is offset by said measurable improvements. Infrastructure improvements at WWTP do not provide the level of environmental enhancements that other improvements such as stream bank restorations provide for the same costs. No other mechanism is available at this time that links to a discharge permit and, thus, Bentonville believes all permittees in the same watershed should be held to the same standard. Once alternative avenues that can be assigned to discharge permits are available to address TP loadings, variable point discharge limits within the same watershed could be pursued provided there is demonstrated improvement in the associated watershed.

Bentonville asks that DEQ be fair and treat all permits equitably.

Response 4: Total Phosphorus numeric limits from the previous permit for the Springdale Water Utilities are not changing in this renewal, and the renewal permit includes a 7-day average concentration limit that was not in the previous permit. In addition, Springdale Water Utilities must conduct an analysis of potential phosphorus concentration reduction in its effluent.

The permit limits for Springdale and the requirement to study the potential for phosphorus concentration reduction in its effluent are consistent with the “Memorandum of Agreement by and between the Oklahoma Secretary of Energy and Environment, The Oklahoma Secretary of Agriculture, the Arkansas Department of Environmental Quality, and the Arkansas Natural Resources Commission, or Successor Agencies” (MOA). The MOA provides the agreed pathway for moving discharge permitting forward as multiple avenues for watershed improvement are pursued and implemented within both states.

OWRB Comments

Comment 5: OWRB does not support an interim or final effluent limitations for Total Phosphorus expressed as a six-month average. Federal regulations (40 CFR 122.45(d)(2)) require that permit effluent limits for POTWs be expressed in terms of a monthly average unless impracticable. The TP effluent limit in the current permit has been expressed as a monthly average since at least 2004. This draft permit provides no justification or rationale as to why a monthly average for the TP effluent limit has become impracticable and thereby warrants a considerable change to a six-month averaging period.

It is presumed that the six-month average period for the effluent limit has been chosen to align with the proposed revision to the Oklahoma TP water quality criterion, which is expected to be adopted with a six-month average duration. The six-month average duration for the water quality criterion was identified as reasonable and protective of beneficial uses because it provides for a time integrated evaluation of instream TP concentrations, which drive the algal biomass response impairing the beneficial use. This was based on analyses demonstrating that the six-month averaging period was relatively similar to the longer periods and a more consistent metric than shorter averaging periods and additional statistical analyses evaluating averaging periods and seasonality. These same scientific findings and rationale for a receiving water criterion averaging period do not seamlessly translate to an effluent limit averaging period for a 24 MGD continuous discharger.

The monthly averaging period for a permit effluent limit is necessary to more carefully and consistently evaluate effluent quality and permit compliance, which is vital to ensure that Oklahoma's TP water quality standard is attained at the state line. A six-month average period for the effluent limit would allow for considerable variability in TP effluent quality, which may lead to increased contributions of TP to the Illinois River and ongoing failure to attain Oklahoma's WQS. It is recommended that the draft permit be revised to reflect a TP limit of 1.0 mg/l as a monthly average.

Response 5: Total Phosphorus numeric limits from the previous permit for the Springdale Water Utilities are not changing in this renewal. The timeframe for the TP concentration limit has been changed to a six-month rolling average to align with the average duration in the updated WQS in Oklahoma. The mass limit remains a monthly average limit in accordance with federal regulations at 40 CFR 122.45(d)(2). The monthly average mass limit also meets requirements in 40 CFR 122.45(f)(1). The permit also includes a new 7-day average concentration limit. Compliance with the monthly average mass limit and 7-day average concentration limit will prevent wide fluctuations in phosphorus loading and ensure consistent effluent quality through permit compliance.

Comment 6: OWRB does not support the twice monthly monitoring frequency for the interim or final TP effluent limit. As described in the above comment, careful evaluation of effluent quality is needed to ensure that TP concentrations are consistently within permit limits. Additionally, the TP Six Months Rolling Basis Compliance Calculations in Part II of the permit provide for an average of monthly TP data and then an average of the most recent six months to calculate a six-

month average TP load for compliance. The repeated use of an average (a metric of central tendency) with only a twice monthly monitoring frequency does not provide an adequate evaluation of effluent quality for permit compliance or ensure that the TP loading is reduced to support attainment or Oklahoma's TP WQS. In comparison, the recently published draft Northwest Arkansas Conservation Authority Regional Wastewater Treatment Facility required TP monitoring three times per week. It is recommended that the draft permit be revised to reflect a TP monitoring frequency of not less than once per week.

Moreover, how will a 1.5 mg/l 7-day average effluent limit be evaluated for compliance if monitoring is only conducted twice monthly? What is the intention of this effluent limit if data is not collected to evaluate it? Please clarify how monitoring and compliance with the 7-day average TP limit is to be conducted.

Response 6: The TP monitoring frequency in the previous permit for this facility is twice per month.

"7-Day Average" also known as "average weekly," means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

For any facility which samples twice per month, the samples should be taken in different calendar weeks. The result for each sample would then be considered the 7-day average for that week. Additional samples may be taken in a calendar week and additional weeks may be sampled within a month, above the minimum requirements of the permit.

Over the past fifteen (15) years, the permittee has not demonstrated any instances of non-compliance with the TP requirements in the previous permit. Therefore, increasing monitoring frequency is not justified at this time.

Additional discussion of 7-day average is provided above in Response 2.

Comment 7: Paragraph 4 on page 9 of the Fact Sheet refers to the fact that during wet-weather events the WWTF may accommodate higher flows and thus while the TP effluent concentrations may be below 1.5 mg/l the daily load limit of 200.2 lbs/day may be exceeded. Furthermore, it is stated that attainment of the six-month average concentration will be the primary focus during future assessments. Please clarify the intention and meaning of this paragraph; what does future assessments mean? It is imperative that the daily load TP limit of 200.2 lbs/day be attained in all weather conditions. Flexibility regarding responsibility to meet this effluent limit should not be obscurely stated in the permit fact sheet. Allowing the permittee to exceed the daily load effluent limit is inconsistent with watershed wide efforts to reduce phosphorus loading and meet applicable Oklahoma WQS as required by the CWA. It is recommended that this entire paragraph be struck from the permit fact sheet; it is inconsistent with effluent limits established in the permit and creates confusion regarding the permittee responsibility to meet effluent limits and potential enforcement actions.

Response 7: The loading limit is not a daily limit, it is a monthly average as stated in Part IA of the permit. As with all average permit limits in any permit issued by any permitting authority, it is expected that there will be conditions under which the daily loading may exceed the monthly average but that there will also be conditions under which the actual daily loadings are less than the monthly average limit. The paragraph in the Fact Sheet will be clarified as follows:

> It is important to note that although the monthly average mass loading is calculated as a steady-state load, the WWTP can accommodate higher flows during wet-weather periods. As a result, actual daily mass loads that occur during wet-weather periods may be above the monthly average mass limit even though the effluent concentration may be less than the 1.5 mg/L 7-day average limit.

Comment 8: The OWRB is thankful for the required analysis of phosphorus reduction for this facility consistent with the 2018 MOA between Oklahoma and Arkansas. They look forward to the results of this analysis. Additionally, general information regarding future plans at the facility would be appreciated. For example, are efforts to optimize the current WWTF underway; are there any plans for upgrades or expansion? This facility is the largest POTW discharger in the watershed and reduction in both TP effluent concentrations and total load would help improve water quality and support the objective to meet applicable Oklahoma WQS as the Illinois River flows from Arkansas into Oklahoma.

Response 8: Springdale Water Utilities has indicated to the OWQ that they are working on a master plan for the facility. The master plan is expected to be completed in the fall or winter of 2021. Any information submitted to the OWQ in regards to expansions or upgrades will be available on the DEQ website shortly after it is submitted.

Save the Illinois River, Inc. (STIR) Comment

Comment 9: STIR is a not for profit, citizen's coalition founded in 1984. Their mission is the protection and preservation of the Illinois River, its tributaries, and Lake Tenkiller. The Illinois River in Oklahoma is a state-designated Oklahoma Scenic River with the highest water quality protection Oklahoma provides. Lake Tenkiller also has high water quality standards.

The Illinois River and Lake Tenkiller are impaired by phosphorus despite Oklahoma's protection efforts which include a 0.037 mg/l limit for TP. This limit is exceeded greatly at the state line and both states are working toward achieving the 0.037 mg/l limit. Nutrient loading of Oklahoma's Illinois River is increasing due in part to the growth of northwestern Arkansas and the increased flow of treated sewage.

STIR does not believe the provisions in the draft permit will enhance the protection of the Illinois River in Oklahoma. Nor do they feel the proposed permit limitations for phosphorus will help achieve the goal of meeting the 0.037 mg/l phosphorus limit Oklahoma has established.

Specifically, STIR objects to the continuation of the 1 mg/l TP limit in the permit when the technology exists to reduce it to a limit of 0.1 mg/l or lower. Further, they object to the proposed permit change to a six-month rolling average for TP testing instead of a seven-day average test.

Response 9: DEQ and Oklahoma entered into a MOA setting forth renewal permit requirements for TP limits in the Illinois River watershed. The TP limits in Springdale's permit are consistent with the requirements of the MOA.

The draft and final permit includes a new 7-day average concentration limit for TP that was not in the previous permit. The mass limit remains a monthly average limit in accordance with federal regulations at 40 CFR 122.45(d)(2) and is not changing with this permit renewal.

Compliance with the monthly average mass limit and 7-day average concentration limit will prevent wide fluctuations in phosphorus loading and ensure consistent effluent quality through permit compliance.

ODEQ Comments

Comment 10: Receiving waters: The fact sheet states that the discharge is to Spring Creek, then to Osage Creek, then to the Illinois River. However, there is no mention that the Illinois River downstream in Oklahoma is an Outstanding Resource Water (ORW) and Scenic River. Further, there is no mention of the beneficial uses of the Illinois River downstream in Oklahoma that must be maintained/protected, including the fact that the Illinois River downstream in Oklahoma is a Cool Water Aquatic Community which comes with higher minimum DO WQ criteria and turbidity criteria.

Response 10: As shown in the water quality model, the DO sag recovers less than six miles from the outfall and more than 23 miles upstream of the state line. Since the DO recovers so far upstream of the state line, Oklahoma's water quality standards and special stream designations as they relate to maintaining the DO standard in the receiving stream do not need to be considered for this permit.

Comment 11: 303(d) List: The fact sheet states that the receiving water is not impaired. However, there is no mention that the Illinois River downstream in Oklahoma is listed on Oklahoma's 2018 303(d) list as impaired for Total Phosphorus and *E. coli*.

Response 11: The Fact Sheet does not mention the impaired waterbodies in Oklahoma because the outfall is approximately 29 miles upstream of the state line. Also, the first reach of the Illinois River in Oklahoma, OK121700030350_00, is not on Oklahoma's 2018 303(d) for *E. coli*. The pathogen indicator limited by this permit is fecal coliform with an end-of-pipe limit set to Arkansas's FCB water quality criteria. Human pathogen effects from the Springdale facility will not cause or contribute to impaired pathogen levels within waters of Oklahoma.

Total Phosphorus numeric limits from the previous permit for the Springdale Water Utilities are not changing in this renewal, and the renewal permit includes a 7-day average concentration limit

that was not in the previous permit. In addition, Springdale Water Utilities must conduct an analysis of potential phosphorus concentration reduction in its effluent.

The permit limits for Springdale and the requirement to study the potential for phosphorus concentration reduction in its effluent are consistent with the "Memorandum of Agreement by and between the Oklahoma Secretary of Energy and Environment, The Oklahoma Secretary of Agriculture, the Arkansas Department of Environmental Quality, and the Arkansas Natural Resources Commission, or Successor Agencies" (MOA). The MOA provides the agreed pathway for moving discharge permitting forward as multiple avenues for watershed improvement are pursued and implemented within both states.

Comment 12: Summary tables in the fact sheet and the linked WQ calculation spreadsheet show no reasonable potential for any metals to exceed AR WQS. However, there was no evaluation of reasonable potential to exceed OK's WQS for the Illinois River downstream.

Response 12: The permitted outfall is approximately 29 stream miles from the Arkansas border with Oklahoma. Based on that distance between the outfall and the border and DEQ's determination that the discharge does not pose the reasonable potential to cause or contribute to any exceedance of the AR WQS for metals, DEQ would not be required to conduct an evaluation of reasonable potential to exceed OK's WQS for metals in the Illinois River 29 stream miles downstream.

Comment 13: Monitoring frequency: The draft permit changes the sample type for most parameters from "24-hour composite" to just "composite." The fact sheet states that this change is to allow the permittee flexibility in how the required samples are collected. 24-hour composite sampling is appropriate and representative for a 24 MGD WWTP operating 24 hours per day. Changing to just a composite sampling type would allow for collecting a minimum of 4 effluent portions over a 24-hour period, which is not appropriate and may not be representative for a 24 MGD WWTP. In addition, there is no explanation or justification in the fact sheet for why such "flexibility" is needed.

Response 13: The permittee currently uses an auto sampler to collect its composite samples. Other composite samples may be collected in accordance with Part IV.9 which defines composite sample as:

"Composite sample" is a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of 4 effluent portions collected at equal time intervals (but not closer than one hour apart) during operational hours, within the 24-hour period, and combined proportional to flow or a sample collected at more frequent intervals proportional to flow over the 24-hour period.

WET samples will continue to be collected in accordance with the requirements outlined in Part II.8.C.iv.a of the permit.

Sufficient data has been collected using 24-hr composite samples. If the data submitted is significantly different from previous years, the OWQ will take appropriate action to determine the cause of the discrepancies and any other action needed to resolve the discrepancies.

This change is also consistent with other DEQ permits.

Comment 14: Total Phosphorus limits: The proposed six-month rolling average limit is inherently less stringent than the existing monthly average limit, given that it would allow for higher variability and magnitude in effluent concentrations. There is no explanation or justification in the fact sheet for why this does not violate anti-backsliding regulations.

Response 14: Total Phosphorus numeric limits from the previous permit for the Springdale Water Utilities are not changing in this renewal, and the renewal permit includes a 7-day average concentration limit that was not in the previous permit. Therefore, an anti-backsliding justification is not necessary.

Compliance with the monthly average mass limit and 7-day average concentration limit will prevent wide fluctuations in phosphorus loading and ensure consistent effluent quality through permit compliance.

DEQ notes that the monthly average TP limit has been changed from 201 lbs/day to 200.2 lbs/day to include a more accurate value for the effluent limit and to comply with the new OWQ guidance.

Comment 15: No RP analysis is provided to indicate whether the 1.0 mg/L/1.5 mg/L TP limits will be protective of local receiving stream AR WQS for TP or downstream OK WQS in the Illinois River ORW. In addition, there is no explanation or justification in the fact sheet to support this variance from OK's WQ criteria for the Illinois River ORW downstream, nor is there any explanation or justification for how these limits reflect the "highest attainable condition" for the receiving water during the term of the variance.

Response 15: Total Phosphorus numeric limits from the previous permit for the Springdale Water Utilities are not changing in this renewal, and the renewal permit includes a 7-day average concentration limit that was not in the previous permit. In addition, Springdale Water Utilities must conduct an analysis of potential phosphorus concentration reduction in its effluent.

The permit limits for Springdale and the requirement to study the potential for phosphorus concentration reduction in its effluent are consistent with the "Memorandum of Agreement by and between the Oklahoma Secretary of Energy and Environment, The Oklahoma Secretary of Agriculture, the Arkansas Department of Environmental Quality, and the Arkansas Natural Resources Commission, or Successor Agencies" (MOA). The MOA provides the agreed pathway for moving discharge permitting forward as multiple avenues for watershed improvement are pursued and implemented within both states.

Comment 16: While the inclusion in the permit of a requirement to perform an analysis of potential phosphorus concentration reduction in the effluent is commendable, granting a full five-year permit term to perform this analysis does not seem reasonable. Sufficient effluent data should already be available to fully characterize current effluent concentrations and existing treatment system performance. Additional evaluations to determine the technical and economic feasibility of reducing phosphorus concentrations through construction of additional treatment units, operational changes, etc., should not take five years to complete; two to three years seems a more appropriate timeframe.

Response 16: The requirement to study the potential for phosphorus concentration reduction in its effluent is consistent with the "Memorandum of Agreement by and between the Oklahoma Secretary of Energy and Environment, The Oklahoma Secretary of Agriculture, the Arkansas Department of Environmental Quality, and the Arkansas Natural Resources Commission, or Successor Agencies" (MOA). The MOA provides the agreed pathway for moving discharge permitting forward as multiple avenues for watershed improvement are pursued and implemented within both states.

In the current MOA, Article II, Section 3.A, the study is required to be completed during the term of the renewed permit. Springdale will have the full five years to complete the study.

As noted previously, Springdale Water Utilities has indicated to the OWQ that they are working on a master plan for the facility. The master plan is expected to be completed in the fall or winter of 2021. Any information submitted to the OWQ in regards to expansions or upgrades will be available on the DEQ website shortly after it is submitted.

Arkansas Department of Parks, Heritage, and Tourism Comments

Comment 17: The Arkansas Department of Parks, Heritage, and Tourism stated that the following species of concern are known to occur at or within 5 miles downstream of the outfall:

Etheostoma mihileze, sunburst darter – state concern
Faxonius nana, midget crayfish – state concern

Response 17: This information will be noted in 7.C of the Fact Sheet. The limits in the permit are designed to protect all beneficial uses of the receiving waters, including propagation of desirable species of fish and other aquatic life as well as other species that are directly or indirectly affected by the receiving waters, which includes the above species of concern. Therefore, DEQ has determined that the final permit limits will serve to help protect the species of concern identified above.