Permit Number: AR0021768
AFIN: 58-00105

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.),

City Corporation
Russellville Water and Sewer System - Pollution Control Facility

is authorized to discharge treated municipal wastewater from a facility located as follows: 404 Jimmy Lile Road, Russellville, AR 72802, in Pope County.

Facility Coordinates: Latitude: 35° 14’ 56” N; Longitude: 93° 06’ 58” W

Receiving stream: Whig Creek, thence to the Arkansas River in Segment 3F of the Arkansas River Basin.

The permitted outfall is located at the following coordinates:

Outfall 001: Latitude: 35° 14’ 42.8” N; Longitude: 93° 06’ 48.3” 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: August 1, 2023
Expiration Date: July 31, 2028

Digitally signed by Alan J. York
DN: cn=Alan J. York, o, ou, email=alan.york@adeq.state.ar.us, c=US
Date: 2023.07.24 09:34:29 -05'00'

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

07/24/2023
Issue Date

PART I
PERMIT REQUIREMENTS

SECTION A.1. TIER I – INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated municipal wastewater.

During the period beginning on the effective date and lasting until three years after the effective date, 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.

Tier I: Limits Effective Prior to Completion of Construction Activities Authorized by State Construction Permit AR0021768C
Design Flow: 7.3 MGD (See Part II.12)

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 ($CBOD_5$)					
(May – October)	608.8	10	15	once/weekday	composite
(November – April)	913.2	15	23	once/weekday	composite
Total Suspended Solids (TSS)					
(May – October)	913.2	15.0	22.5	once/weekday	composite
(November – April)	1217.6	20.0	30.0	once/weekday	composite
Ammonia Nitrogen (NH_3-N)					
(April – October)	133.9	2.2	5.6	once/weekday	composite
(November – March)	243.5	4.0	6.0	once/weekday	composite
Dissolved Oxygen (DO)	N/A	6.0 (Inst. Min.)		once/weekday	grab
Fecal Coliform Bacteria (FCB)	N/A	(colonies/100ml)		once/weekday	grab
		1000	2000		
Total Residual Chlorine (TRC) [2]	N/A	0.011 (Inst. Max.) [3]		once/weekday	grab
Residual Peracetic Acid (PAA) [4,5]	N/A	1.0 (Inst. Max.) [6]		once/weekday	grab
Nitrogen, Nitrate Total as N (NO_3-N)	542.0	10.0	15.0	once/weekday	composite

[1] See Part II.5 (SSO Condition). If there are no overflows during the entire month, report "zero" (0).
[2] TRC must be measured using any approved test method established in 40 C.F.R. Part 136 capable of meeting a minimum quantification level (MQL) of 0.033 mg/l or lower. If TRC is not reportable at the required MQL (i.e., lab result is "ND"), report "0" on the Discharge Monitoring Report (DMR). Report the concentration if TRC is quantifiable and measured in the sample at or above this or an alternatively approved MQL.
[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. The monitoring and reporting of TRC on the DMRs applies only when TRC is being used for disinfection. If TRC is not used during a monitoring period, report NODI=9 (Conditional Monitoring – Not Required This Period) for the TRC parameter for that monitoring period.
[4] See Part II.13 for acceptable residual PAA test methods.
[5] The monitoring and reporting of PAA on the DMRs applies only when PAA is being used for disinfection. If PAA is not used during a monitoring period, report NODI=9 (Conditional Monitoring – Not Required This Period) for the PAA parameter for that monitoring period.
[6] The effluent limitation for residual PAA is the instantaneous maximum and cannot be averaged for reporting purposes. Residual PAA shall be measured within fifteen (15) minutes of sampling.

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.		
Arsenic, Total Recoverable [7, 8]	Report	Report, µg/l	Report, µg/l	once/quarter	composite
Copper, Total Recoverable [7]	0.45	9.2 µg/l	18.5 µg/l	once/month	composite
Mercury, Total Recoverable [7]	0.00082	0.0134 µg/l	0.0269 µg/l	once/month	composite
Zinc, Total Recoverable [7]	5.2	85.5 µg/l	171.6 µg/l	once/month	composite
Pentachlorophenol [7]	Report	Report, µg/l	Report, µg/l	once/month	composite
Total Phosphorus (TP)	Report	Report	Report	once/month	composite
Nitrate + Nitrite – Nitrogen (NO_3+NO_2-N)	Report	Report	Report	once/month	composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/weekday	grab
Whole Effluent Toxicity (WET)					
***Pimephales promelas* (Chronic)** [9]	N/A	7-Day Minimum			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Growth (7-day NOEC) TGP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	composite
Coefficient of Variation (Growth) TQP6C		Report %		once/quarter	composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	composite
Pass/Fail Retest 1 (7-day NOEC) 22418		Report (Pass=0/Fail=1)		once/month [10]	composite
Pass/Fail Retest 2 (7-day NOEC) 22419		Report (Pass=0/Fail=1)		once/month [10]	composite
Pass/Fail Retest 3 (7-day NOEC) 51444		Report (Pass=0/Fail=1)		once/month [10]	composite
***Ceriodaphnia dubia* (Chronic)** [9]		7-Day Minimum			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Reproduction (7-day NOEC) TGP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	composite
Coefficient of Variation (Reproduction) TQP3B		Report %		once/quarter	composite
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	composite
Pass/Fail Retest 1 (7-day NOEC) 22415		Report (Pass=0/Fail=1)		once/month [10]	composite
Pass/Fail Retest 2 (7-day NOEC) 22416		Report (Pass=0/Fail=1)		once/month [10]	composite
Pass/Fail Retest 3 (7-day NOEC) 51443		Report (Pass=0/Fail=1)		once/month [10]	composite

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.

[7] See Part II.8 regarding priority pollutant MQLs.
[8] Arsenic monitoring is required only for the first four (4) quarters after the effective date of the permit. See Part II.10 regarding Total Recoverable Arsenic monitoring requirements.
[9] See Part II.9 (WET Testing Requirements).
[10] 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*.

SECTION A.2. TIER II – INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated municipal wastewater.

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

Tier II: Limits Effective After Completion of Construction Activities Authorized by State Construction Permit AR0021768C
Design Flow: 8.5 MGD (See Part II.12)

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 ($CBOD_5$)					
(May – October)	708.9	10	15	once/weekday	composite
(November – April)	638.0	9.0	14	once/weekday	composite
Total Suspended Solids (TSS)					
(May – October)	1063.4	15.0	22.5	once/weekday	composite
(November – April)	1417.8	20.0	30.0	once/weekday	composite
Ammonia Nitrogen (NH_3-N)	156.0	2.2	3.3	once/weekday	composite
Dissolved Oxygen (DO)	N/A	6.0 (Inst. Min.)		once/weekday	grab
Fecal Coliform Bacteria (FCB)	N/A	(colonies/100ml)		once/weekday	grab
		1000	2000		
Residual Peracetic Acid (PAA) [2]	N/A	1.0 (Inst. Max.) [3]		once/weekday	grab
Nitrogen, Nitrate Total as N (NO_3-N)	542.0	10.0	15.0	once/weekday	composite
Arsenic, Total Recoverable [4, 5]	Report	Report, µg/l	Report, µg/l	once/quarter	composite
Copper, Total Recoverable [4]	0.45	9.2 µg/l	18.5 µg/l	once/month	composite
Mercury, Total Recoverable [4]	0.00095	0.0134 µg/l	0.0269 µg/l	once/month	composite
Zinc, Total Recoverable [4]	6.1	85.5 µg/l	171.6 µg/l	once/month	composite
Pentachlorophenol [4]	Report	Report, µg/l	Report, µg/l	once/month	composite
Total Phosphorus (TP)	Report	Report	Report	once/month	composite
Nitrate + Nitrite – Nitrogen (NO_3+NO_2-N)	Report	Report	Report	once/month	composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/weekday	grab

[1] See Part II.5 (SSO Condition). If there are no overflows during the entire month, report "zero" (0).
[2] See Part II.13 for acceptable residual PAA test methods.
[3] The effluent limitation for residual PAA is the instantaneous maximum and cannot be averaged for reporting purposes. Residual PAA shall be measured within fifteen (15) minutes of sampling.
[4] See Part II.8 regarding priority pollutant MQLs.
[5] Arsenic monitoring is required only for the first four (4) quarters after the effective date of the permit. See Part II.10 regarding Total Recoverable Arsenic monitoring requirements.

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.		
Whole Effluent Toxicity (WET)					
***Pimephales promelas* (Chronic)** [6]	N/A	7-Day Minimum			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Growth (7-day NOEC) TGP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	composite
Coefficient of Variation (Growth) TQP6C		Report %		once/quarter	composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	composite
Pass/Fail Retest 1 (7-day NOEC) 22418		Report (Pass=0/Fail=1)		once/month [7]	composite
Pass/Fail Retest 2 (7-day NOEC) 22419		Report (Pass=0/Fail=1)		once/month [7]	composite
Pass/Fail Retest 3 (7-day NOEC) 51444		Report (Pass=0/Fail=1)		once/month [7]	composite
***Ceriodaphnia dubia* (Chronic)** [6]		7-Day Minimum			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Reproduction (7-day NOEC) TGP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	composite
Coefficient of Variation (Reproduction) TQP3B		Report %		once/quarter	composite
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	composite
Pass/Fail Retest 1 (7-day NOEC) 22415		Report (Pass=0/Fail=1)		once/month [7]	composite
Pass/Fail Retest 2 (7-day NOEC) 22416		Report (Pass=0/Fail=1)		once/month [7]	composite
Pass/Fail Retest 3 (7-day NOEC) 51443		Report (Pass=0/Fail=1)		once/month [7]	composite

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.

[6] See Part II.9 (WET Testing Requirements).

[7] 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*.

SECTION A.3. TIER I – FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated municipal wastewater.

During the period beginning three years after 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.

Tier I: Limits Effective Prior to Completion of Construction Activities Authorized by State Construction Permit AR0021768C
Design Flow: 7.3 MGD (See Part II.12)

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 ($CBOD_5$)					
(May – October)	608.8	10	15	once/weekday	composite
(November – April)	913.2	15	23	once/weekday	composite
Total Suspended Solids (TSS)					
(May – October)	913.2	15.0	22.5	once/weekday	composite
(November – April)	1217.6	20.0	30.0	once/weekday	composite
Ammonia Nitrogen (NH_3-N)					
(April – October)	133.9	2.2	5.6	once/weekday	composite
(November – March)	243.5	4.0	6.0	once/weekday	composite
Dissolved Oxygen (DO)	N/A	6.0 (Inst. Min.)		once/weekday	grab
Fecal Coliform Bacteria (FCB)	N/A	(colonies/100ml)		once/weekday	grab
		1000	2000		
Total Residual Chlorine (TRC) [2]	N/A	0.011 (Inst. Max.) [3]		once/weekday	grab
Residual Peracetic Acid (PAA) [4,5]	N/A	1.0 (Inst. Max.) [6]		once/weekday	grab
Nitrogen, Nitrate Total as N (NO_3-N)	542.0	10.0	15.0	once/weekday	composite
Arsenic, Total Recoverable [7, 8]	Report	Report, µg/l	Report, µg/l	once/quarter	composite
Copper, Total Recoverable [7]	0.45	9.2 µg/l	18.5 µg/l	once/month	composite
Mercury, Total Recoverable [7]	0.00082	0.0134 µg/l	0.0269 µg/l	once/month	composite

[1] See Part II.5 (SSO Condition). If there are no overflows during the entire month, report "zero" (0).
[2] TRC must be measured using any approved test method established in 40 C.F.R. Part 136 capable of meeting a minimum quantification level (MQL) of 0.033 mg/l or lower. If TRC is not reportable at the required MQL (i.e., lab result is "ND"), report "0" on the Discharge Monitoring Report (DMR). Report the concentration if TRC is quantifiable and measured in the sample at or above this or an alternatively approved MQL.
[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. The monitoring and reporting of TRC on the DMRs applies only when TRC is being used for disinfection. If TRC is not used during a monitoring period, report NODI=9 (Conditional Monitoring – Not Required This Period) for the TRC parameter for that monitoring period.
[4] See Part II.13 for acceptable residual PAA test methods.
[5] The monitoring and reporting of PAA on the DMRs applies only when PAA is being used for disinfection. If PAA is not used during a monitoring period, report NODI=9 (Conditional Monitoring – Not Required This Period) for the PAA parameter for that monitoring period.
[6] The effluent limitation for residual PAA is the instantaneous maximum and cannot be averaged for reporting purposes. Residual PAA shall be measured within fifteen (15) minutes of sampling.
[7] See Part II.8 regarding priority pollutant MQLs.
[8] Arsenic monitoring is required only for the first four (4) quarters after the effective date of the permit. See Part II.10 regarding Total Recoverable Arsenic monitoring requirements.

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.		
Zinc, Total Recoverable [7]	5.2	85.5 µg/l	171.6 µg/l	once/month	composite
Pentachlorophenol [7]	Report	Report, µg/l	Report, µg/l	once/month	composite
Total Phosphorus (TP)	Report	Report	Report	once/month	composite
Nitrate + Nitrite – Nitrogen (NO_3+NO_2-N)	Report	Report	Report	once/month	composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/weekday	grab
Whole Effluent Toxicity (WET)					
P. promelas Limit 51714		7-Day Minimum Lethality Not < 100 %		once/quarter	composite
		7-Day Minimum Sub-Lethality Not < 80 %		once/quarter	composite
***Pimephales promelas* (Chronic)** [9, 10]	N/A	7-Day Minimum			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Growth (7-day NOEC) TGP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	composite
Coefficient of Variation (Growth) TQP6C		Report %		once/quarter	composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	composite
***Ceriodaphnia dubia* (Chronic)** [11]		7-Day Minimum			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Reproduction (7-day NOEC) TGP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	composite
Coefficient of Variation (Reproduction) TQP3B		Report %		once/quarter	composite
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	composite
Pass/Fail Retest 1 (7-day NOEC) 22415		Report (Pass=0/Fail=1)		once/month [12]	composite
Pass/Fail Retest 2 (7-day NOEC) 22416		Report (Pass=0/Fail=1)		once/month [12]	composite
Pass/Fail Retest 3 (7-day NOEC) 51443		Report (Pass=0/Fail=1)		once/month [12]	composite

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.

[9] See Part II.14 (WET Limit Condition)
[10] As per Part II.14 (WET Limit Condition), the permittee shall submit the results of the valid monthly increased frequency toxicity tests on the Unscheduled DMRs (51714, TLP6C, TOP6C, TPP6C, TGP6C, TQP6C. This condition applies to *P. promelas*.
[11] See Part II.9 (WET Testing Requirements).
[12] 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 *C. dubia*.

SECTION A.4 TIER II – FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated municipal wastewater.

During the period beginning three years after 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.

Tier II: Limits Effective After Completion of Construction Activities Authorized by State Construction Permit AR0021768C
Design Flow: 8.5 MGD (See Part II.12)

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 ($CBOD_5$)					
(May – October)	708.9	10	15	once/weekday	composite
(November – April)	638.0	9.0	14	once/weekday	composite
Total Suspended Solids (TSS)					
(May – October)	1063.4	15.0	22.5	once/weekday	composite
(November – April)	1417.8	20.0	30.0	once/weekday	composite
Ammonia Nitrogen (NH_3-N)	156.0	2.2	3.3	once/weekday	composite
Dissolved Oxygen (DO)	N/A	6.0 (Inst. Min.)		once/weekday	grab
Fecal Coliform Bacteria (FCB)	N/A	(colonies/100ml)		once/weekday	grab
		1000	2000		
Residual Peracetic Acid (PAA) [2]	N/A	1.0 (Inst. Max.) [3]		once/weekday	grab
Nitrogen, Nitrate Total as N (NO_3-N)	542.0	10.0	15.0	once/weekday	composite
Arsenic, Total Recoverable [4, 5]	Report	Report, µg/l	Report, µg/l	once/quarter	composite
Copper, Total Recoverable [4]	0.45	9.2 µg/l	18.5 µg/l	once/month	composite
Mercury, Total Recoverable [4]	0.00095	0.0134 µg/l	0.0269 µg/l	once/month	composite
Zinc, Total Recoverable [4]	6.1	85.5 µg/l	171.6 µg/l	once/month	composite
Pentachlorophenol [4]	Report	Report, µg/l	Report, µg/l	once/month	composite
Total Phosphorus (TP)	Report	Report	Report	once/month	composite
Nitrate + Nitrite – Nitrogen (NO_3+NO_2-N)	Report	Report	Report	once/month	composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/weekday	grab

[1] See Part II.5 (SSO Condition). If there are no overflows during the entire month, report "zero" (0).
[2] See Part II.13 for acceptable residual PAA test methods.
[3] The effluent limitation for residual PAA is the instantaneous maximum and cannot be averaged for reporting purposes. Residual PAA shall be measured within fifteen (15) minutes of sampling.
[4] See Part II.8 regarding priority pollutant MQLs.
[5] Arsenic monitoring is required only for the first four (4) quarters after the effective date of the permit. See Part II.10 regarding Total Recoverable Arsenic monitoring requirements.

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.		
Whole Effluent Toxicity (WET)					
P. promelas Limit 51714		7-Day Minimum Lethality Not < 100 %		once/quarter	composite
		7-Day Minimum Sub-Lethality Not < 80 %		once/quarter	composite
***Pimephales promelas* (Chronic)** [6, 7]	N/A	7-Day Minimum			
Pass/Fail Lethality (7-day NOEC) TLP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Growth (7-day NOEC) TGP6C		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP6C		Report %		once/quarter	composite
Coefficient of Variation (Growth) TQP6C		Report %		once/quarter	composite
Growth (7-day NOEC) TPP6C		Report %		once/quarter	composite
***Ceriodaphnia dubia* (Chronic)** [8]		7-Day Minimum			
Pass/Fail Lethality (7-day NOEC) TLP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Reproduction (7-day NOEC) TGP3B		Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP3B		Report %		once/quarter	composite
Coefficient of Variation (Reproduction) TQP3B		Report %		once/quarter	composite
Reproduction (7-day NOEC) TPP3B		Report %		once/quarter	composite
Pass/Fail Retest 1 (7-day NOEC) 22415		Report (Pass=0/Fail=1)		once/month [9]	composite
Pass/Fail Retest 2 (7-day NOEC) 22416		Report (Pass=0/Fail=1)		once/month [9]	composite
Pass/Fail Retest 3 (7-day NOEC) 51443		Report (Pass=0/Fail=1)		once/month [9]	composite

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.

[6] See Part II.14 (WET Limit Condition)
[7] As per Part II.14 (WET Limit Condition), the permittee shall submit the results of the valid monthly increased frequency toxicity tests on the Unscheduled DMRs (51714, TLP6C, TOP6C, TPP6C, TGP6C, TQP6C. This condition applies to *P. promelas*.
[8] See Part II.9 (WET Testing Requirements).
[9] 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 *C. dubia*.

SECTION B. PERMIT COMPLIANCE SCHEDULE

Pursuant to 40 C.F.R. § 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:

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 twelve (12) months of the effective date of this permit.

Reports can be emailed to Pretreatment-Submittals@adeq.state.ar.us or sent by postal mail to

Division of Environmental Quality
Office of Water Quality – Pretreatment Program
5301 Northshore Drive
North Little Rock, AR 72118

Compliance with the Final Effluent Limitations for Whole Effluent Toxicity (*P. promelas* only) 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
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] The required progress report must state if the levels of the aforementioned parameter are above or below the Final Effluent Limitation.

[2] If the levels of the aforementioned parameter are below the Final Effluent Limitation, the final limits become effective one year and 30 days from the effective date. All subsequent Activity Milestones listed in this Compliance Schedule will be effectively met.

If the levels of the aforementioned parameter are above the Final Effluent Limitation, the progress report must detail how the permittee plans to come into compliance with the final limits within the remaining 2 years of the interim period. The progress report must list the options that were considered and justification for the chosen option must be included. 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 (including any necessary construction permits) prior to 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 30 days following the final compliance date and include a certification that the final effluent limit was 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 C.F.R. § 133.102, as adopted by reference in APC&EC Rule 6.

3. In accordance with 40 C.F.R. §§ 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 C.F.R. Part 136 or approved in accordance with 40 C.F.R. § 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 C.F.R. Part 403) and the approved POTW pretreatment program submitted by the permittee. The pretreatment program was originally approved on January 13, 1984, modified on March 10, 1992, and once again modified and approved on July 29, 2012 to be compliant with the October 2005 Streamlining revisions to the Federal Pretreatment Regulations in 40 C.F.R. Part 403. The POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

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

ii. 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 C.F.R. § 403.8(f)(2)(v). This is in addition to any industrial self-monitoring activities;

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

iv. 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 C.F.R. § 403.3(v), this control shall be achieved through individual control mechanisms, in accordance with 40 C.F.R. § 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 C.F.R. Part 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.

v. The permittee shall evaluate, whether each Significant Industrial User needs a plan or other action to control slug discharges, in accordance with 40 C.F.R. § 403.8(f)(2)(vi);

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

vii. 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 C.F.R. §§ 403.5(a) and (b), as required by 40 C.F.R. § 403.5(c). POTWs may develop Best Management Practices (BMPs) to implement paragraphs 40 C.F.R. §§ 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 C.F.R. § 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 C.F.R. Part 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 C.F.R. Part 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.8 of the permit. In accordance with 40 C.F.R. § 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 C.F.R. Part 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 C.F.R. § 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 **February** in the newspaper of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW.

Note: For permittees with multiple NPDES permits, only one (1) updated pretreatment program status report ("Annual Report") is required. The annual report shall reference the Tracking NPDES Permit Number **AR0021768** for the permittee's approved Pretreatment Program.

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 **February** the permittee shall submit an updated pretreatment program status report to the DEQ containing the following information:

i. An updated list of all significant industrial users. The list must identify:

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

b. Industrial Users subject to categorical Pretreatment Standards that are subject to reduced monitoring and reporting requirements under 40 C.F.R. § 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 C.F.R. Part 414], Petroleum Refining [40 C.F.R. Part 419], and Pesticide Chemicals [40 C.F.R. 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. §§ 403.12(b), (e) and (h).

ii. 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:

(1) total number of inspections performed;

(2) total number of sampling visits made;

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

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

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

(3) 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.

iii. 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;

iv. 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;

v. The results of all influent and effluent analyses performed pursuant to Item C above;

vi. 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;

vii. 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

viii. 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:

i. 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

ii. 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. Priority Pollutant MQLs

The permittee may use any EPA approved method based on 40 C.F.R. 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 (µg/l)
Arsenic, Total Recoverable	0.5
Copper, Total Recoverable	0.5
Zinc, Total Recoverable	20
Mercury, Total Recoverable	0.005
Pentachlorophenol	5

The permittee may develop a matrix specific method detection limit (MDL) in accordance with Appendix B of 40 C.F.R. 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 Discharge Monitoring Report (DMR) calculations and reporting requirements.

9. Whole Effluent Toxicity (7-Day Chronic NOEC Freshwater)

This condition applies to *C. dubia* for the permit term and *P. promelas* for the first three years of the permit term.

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(S):	001
REPORTED ON DMR AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	100%
EFFLUENT DILUTION SERIES (%):	32, 42, 56, 80, 100
TESTING FREQUENCY:	once/quarter
COMPOSITE SAMPLE TYPE:	Defined in Paragraph C.iv.a
TEST SPECIES/METHODS:	40 C.F.R. 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 DEQ 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 DEQ 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)

iv. DMR parameters

Report the following parameters on the DMR:

(a) Scheduled DMR: TLP6C, TOP6C, TPP6C, TGP6C, TQP6C, 22418, 22419, 51444,

TLP3B, TOP3B, TPP3B, TGP3B, TQP3B, 22415, 22416, and 51443.

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 80% 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 C.F.R. § 122.44(d)(1)(v).

F. MONITORING FREQUENCY REDUCTION

This condition applies to *C. dubia* only.

i. The permittee may apply for a testing frequency reduction upon the successful completion of the first eight (8) consecutive quarters (in accordance with Item A.i.) after the first use of Peracetic Acid (PAA) begins during 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 six months 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.

10. Total Recoverable Arsenic

The requirement to monitor and report the monthly average and daily maximum values of mass and concentration of Total Recoverable Arsenic in the effluent, in accordance with the requirements in Part I.A of the permit, is applicable for one (1) year from the effective date of the permit. After the results of four (4) samples have been reported, in accordance with the requirements above, the permittee may cease the monitoring and reporting of Total Recoverable Arsenic.

11. Monitoring Frequency Reduction

The permittee may request a one-time monitoring frequency reduction for parameters with a monitoring frequency of once/weekday 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 concentrations 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 by 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.

12. Transition Period

The permittee is modifying the existing wastewater treatment facility. The modifications include:

Decommissioning of:
- Existing primary clarification,
- Existing chlorine disinfection system and contact basins,
- Existing sulfur dioxide dechlorination system;

Conversion of:
- Existing primary clarifier #3 into an anaerobic selector,
- Existing aerobic digesters to aerobic sludge holding tanks;

Installation of:
- One (1) new aeration basin,
- New peracetic acid (PAA) disinfection system and contact basin;

Replacement of:
- Existing aeration blowers and expansion of blower capacity,
- Corroded portions of existing secondary clarifier mechanical equipment,
- Existing non-potable pump station,

- Aerated sludge mixing system;

Relocation of:

- Final effluent sampling location.

The design flow at Outfall 001 will be increasing from 7.3 MGD to 8.5 MGD when the modified system is constructed and operating.

A. Beginning on the effective date of the permit, the permittee must submit a Discharge Monitoring Report (DMR) for each permitted design flow (i.e. Tier I = 7.3 MGD and Tier II = 8.5 MGD) on a monthly basis. The DMR for Tier II can be marked and submitted as NODI=9 (Conditional Monitoring – Not Required This Period) until such time as the new treatment system is operational. The permittee must continue to submit two (2) monthly DMRs until the notification required in the following Item B of this condition is received.

B. The permittee must notify DEQ within 30 days of completion of construction of the modifications to the treatment facility. The permittee shall follow Tier II requirements after notification until the end of the permit term.

C. The notification for this condition shall either be mailed to:

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

or submitted electronically via email to: water-permit-application@adeq.state.ar.us

13. Analysis of residual PAA shall be performed using any of the following methods:

a. CHEMetrics Kit K-7904 (DPD Visual Method)
b. CHEMetrics Kit K-7913 (DPD Instrumental Method)
c. Hach Method 10297 (DPD Instrumental Method)

Use of any other test method for residual PAA will require prior Division approval.

14. Whole Effluent Toxicity Limits (7-Day Chronic NOEC Freshwater)

This condition applies to *P. promelas* only three years after the beginning of the permit term.

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(S): 001

REPORTED ON DMR AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	100%
EFFLUENT DILUTION SERIES (%):	32, 42, 56, 80, 100
CHRONIC LIMIT - LETHALITY:	not < 100%
CHRONIC LIMIT - SUB-LETHAL:	not < 80%
SCHEDULE OF COMPLIANCE:	YES
TESTING FREQUENCY:	once/quarter
COMPOSITE SAMPLE TYPE:	Defined in Paragraph B.iv.a
TEST SPECIES/METHODS:	40 C.F.R. § 136

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) at test completion to a test species at or below the critical dilution.

iii. The conditions of this item are effective beginning with the effective date of the WET limit. When the effluent fails the chronic endpoint below the required limit specified in Item A.i., the permittee shall be considered in violation of this permit limit and the frequency for the affected species will increase to monthly until such time compliance with the No Observed Effect Concentration (NOEC) effluent limitation is demonstrated for a period of three consecutive months, at which time the permittee may return to the testing frequency stated in PART I of this permit. The purpose of the increased frequency WET testing 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.

iv. If under a TRE, the permittee may conduct quarterly testing as a minimum monitoring requirement for the organism(s) under investigation for the duration of the TRE. Upon

completion of the TRE, monitoring will revert back to the conditions specified in Item A.iii.

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

B. 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. (reserved)

c. (reserved)

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 growth and survival 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 growth and survival endpoints in 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 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. (reserved)

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

ii. Statistical Interpretation

a. (reserved)

b. For 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 B.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 C 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 where the receiving stream is classified as intermittent or where the receiving stream has no flow 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 B.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 B.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 C.i 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 must collect all three flow-weighted composite samples within the monitoring period. The permittee shall collect second and third composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on 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 C 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.

C. 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 which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

ii. The permittee shall report the Whole Effluent Toxicity NOECs under Parameter No. 51714 for *P. promelas*on the Scheduled DMR for that reporting period in accordance with PART III.D.4 of this permit.

A valid test for each species must be reported on the Scheduled 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 increased frequency tests (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 the valid toxicity test on the Scheduled DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. The permittee shall submit the results of the valid monthly increased frequency toxicity tests on the Unscheduled DMRs. If testing on a quarterly basis, the permittee may substitute one of the monthly increased frequency toxicity tests in lieu of one Scheduled toxicity test on the Scheduled DMR. Only results of valid tests are to be reported on a 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) Report the lowest NOEC value for survival or growth, Limit Parameter No. 51714

(7) The permittee shall submit the results of the monthly increased frequency toxicity tests on the Unscheduled DMRs.

b. (reserved)

iv. DMR parameters

Report the following parameters on the DMR:

(a) Scheduled DMR: 51714, TLP6C, TOP6C, TPP6C, TGP6C, TQP6C

(b) Unscheduled DMR: 51714, TLP6C, TOP6C, TPP6C, TGP6C, TQP6C

D. 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 80% 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 monthly increased frequency tests, 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 C.F.R. § 122.44(d)(1)(v).

E. TOXICITY RE-OPENER

i. If the TRE has identified the source of toxicity and led to the successful elimination of effluent toxicity at the critical dilution, the WET final effluent limits may be replaced by monitoring and reporting only requirement thru a major permit modification. Otherwise, the permittee must comply with the final WET effluent limits.

ii. If the TRE has not led to the successful elimination of effluent toxicity at the critical dilution, but has identified a causal parameter, the WET final effluent limit may be replaced by monitoring and reporting only requirement thru a major permit modification, with the addition of a limit for the causal parameter.

(Note: A modified permit must be effective prior to the effective date of the WET limits.)

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 regulation under authority preserved by Section 510 of the Clean Water Act.

8. **Property Rights**

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

9. **Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions of this permit to any circumstance is held invalid, the application

of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

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

Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable federal 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 promptly remit all required fees shall be grounds for the Director to initiate action to terminate this permit under the provisions of 40 C.F.R. §§ 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 C.F.R. § 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 periods of equipment downtime or preventive maintenance; and
(c) The permittee submitted notices as required by Part III.B.4.B.

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

5. **Upset Conditions**

A. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Part III.B.5.B of this section are met. No determination made during administrative

review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

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

1. An upset occurred and that the permittee can identify the specific cause(s) of the upset.
2. The permitted facility was at the time being properly operated.
3. The permittee submitted notice of the upset as required by Part III.D.6.
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 C.F.R. Parts 257, 258, and 503.

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 C.F.R. 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 C.F.R. § 127.11(a)(1) and 40 C.F.R. § 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 C.F.R. § 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 C.F.R. 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 C.F.R. § 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 C.F.R. § 122.29(b).
B. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to the notification requirements under 40 C.F.R. § 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 including Existing Manufacturing, Commercial, Mining, and Silvicultural 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 including those listed in 40 C.F.R. § 401.15 which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 C.F.R. § 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 including those listed in 40 C.F.R. § 401.15 which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" described in 40 C.F.R. § 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 C.F.R. 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 C.F.R. § 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 C.F.R. § 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 C.F.R. 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.

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, or 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 revoking/reissuing of discharge Permit Number AR0021768 with Arkansas Department of Energy and Environment – Division of Environmental Quality (DEQ) Arkansas Facility Identification Number (AFIN) 58-00105 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:

City Corporation - Russellville Water and Sewer System - Pollution Control Facility
P.O. Box 3186
Russellville, AR 72811

The facility address is:

City Corporation - Russellville Water and Sewer System - Pollution Control Facility
404 Jimmy Lile Road
Russellville, AR 72802

3. PREPARED BY

The permit was prepared by:

Faizan Khan
Staff Engineer
NPDES Discharge Permits Section
Office of Water Quality
(501) 682-0670
E-mail: faizan.khan@adeq.state.ar.us

Carrie McWilliams, P.E.
Engineer Supervisor
NPDES Discharge Permits Section
Office of Water Quality

4. PERMIT ACTIVITY

Previous Permit Effective Date:	September 1, 2016
Previous Permit Expiration Date:	August 31, 2021

The permittee submitted a permit revoke and reissue application on September 28, 2020, with all additional information received by March 22, 2022. A state construction permit application for significant modifications to the facility's treatment system was also received on February 24, 2021, with all additional information received by July 16, 2021. Based on both applications,

the facility's design flow is set to increase from 7.3 to 8.5 MGD during the permit term. More information regarding the treatment system modifications is included in Section 8 of this Fact Sheet.

It is the previous discharge permit is being revoked and reissued for a 5-year term in accordance with regulations promulgated at 40 C.F.R. § 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
C.F.R. - 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 2
Rule 6 - APC&EC Rule 6
Rule 8 - APC&EC Rule 8
Rule 9 - APC&EC Rule 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:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0021768_Enforcement%20Review_20210604.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 facility's mailing address was removed from the cover page.
2. The coordinates for Outfall 001 were updated based on an inspection report dated May 27, 2021.
3. Tiered limits and requirements were added to Part I.A; Part I.A.1 was added for Tier I limits for the facility's existing, pre-construction treatment system and design flow of 7.3 MGD; Part I.A.2 was added for Tier II limits applicable to the post-construction treatment system and design flow of 8.5 MGD.
4. A monitoring and reporting requirement for Pentachlorophenol was added. See Section 12.E of this Fact Sheet for details.
5. Decimal places in the concentration limits for $CBOD_5$ in Part I.A were updated per current Office of Water Quality (OWQ) rounding procedures.
6. The name of the parameter NO_3-N was updated from "Nitrate" to "Nitrogen, Nitrate Total as N" in Part I.A. The update was made to provide clarification for NetDMR reporting purposes; however, the parameter itself and its requirements in the permit were not changed.
7. A Residual Peracetic Acid (PAA) instantaneous maximum limit of 1.0 mg/l was added. PAA monitoring for Tier I limits is only required when the facility is using PAA for disinfection, and TRC monitoring for Tier I limits is only required when the facility is using chlorine for disinfection.
8. Monitoring and reporting requirements for Total Phosphorus (TP) and Nitrate + Nitrite – Nitrogen (NO_3+NO_2-N) were added. See Part I.A of the permit and Section 12.A of this Fact Sheet for more information.

9. Conditional WET reporting requirements were added. See the WET sections in Part I.A of the permit for more information.
10. The following updates were made for the Tier II limits in Part I.A.2:
    a. All existing mass limits, with the exception of NO_3-N and Total Recoverable Copper, were recalculated for the Tier II design flow of 8.5 MGD; see Section 12.C.1 of this Fact Sheet for more information. The NO_3-N and Total Recoverable Copper mass limits were not updated since they are based on TMDLs. See Section 7.B.i of this Fact Sheet for more information.
    b. The $CBOD_5$ concentration limits for November – April were updated based on an updated modeling analysis; the monthly average limit was updated from 15.0 to 9.0 mg/l, and the 7-day average limit was updated from 22.5 to 14 mg/l.
    c. The NH_3-N concentration limits for November – March were updated based on an updated modeling analysis; the monthly average limit was updated to 2.2 mg/l, and the 7-day average limit was updated to 3.3 mg/l, year-round.
    d. The Total Residual Chlorine (TRC) limit was removed.
11. Part II.6 of the permit (SSO condition) was updated.
12. Part II.7 of the permit (Pretreatment condition) was updated.
13. Part II.8 of the previous permit, the bio-solids practices condition, was removed from the permit. All subsequent conditions in Part II were renumbered as a result. Sludge practices are now addressed in Part III.B.6 of the permit, with additional information in Section 11 of this Fact Sheet.
14. The monitoring frequency reduction requirements for WET testing in Part II.9.F.i (Part II.11.F.i of the previous permit) were updated from successful completion of the first four (4) consecutive quarters or first twelve (12) consecutive months to the first eight (8) consecutive quarters after the first use of PAA for disinfection since there is currently limited water quality-based toxicity data for PAA.
15. Part II.11, a condition regarding monitoring frequency reduction was added.
16. Part II.12, a condition regarding the facility's transition to the modified treatment system was added.
17. Part II.13, a condition regarding PAA analytical methods was added.
18. Part III.C.5 of the permit now requires that DMRs be submitted electronically via NetDMR.
19. Part III.D.6, the condition regarding twenty-four hour reporting, was updated.
20. Part III.D.8, the condition regarding discharge of toxic substances, was updated.
21. Final limitations and a schedule of compliance were added for *P. promelas* Chronic Whole Effluent Toxicity. See Parts I.A, I.B, and II.14 of the permit and sections 14 and 17 of this Fact Sheet for details.

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION

The outfall is located at the following coordinates based on an inspection report dated May 27, 2021, and confirmed with Google Earth:

Latitude: 35° 14' 42.8" N; Longitude: 93° 06' 48.3" W

The receiving waters named:

Whig Creek, thence to the Arkansas River in Segment 3F of the Arkansas River Basin. The receiving stream with Assessment Unit (AU) AR_11110203_931 is a Water of the State classified for 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, Whig Creek (AR_11110203_931), is listed on Arkansas's 2018 List of Impaired Waterbodies (303(d)) for the following impairments:

i. **Category 1b for copper**. Waterbodies in Category 1b are defined as "attaining all water quality criteria and supporting all designated uses; however, a TMDL remains in place for one or more constituents." See the following section, Section 7.B of this Fact Sheet, for more information on the referenced TMDL and wasteload allocation (WLA) for copper.

ii. **Category 4a for nitrate (NO_3-N)**. Category 4a waterbodies are those in which "water quality standards are not attained for one or more designated uses but the development of a TMDL is not required because: a TMDL has been completed for the listed parameter(s)." See the following section, Section 7.B of this Fact Sheet, for more information on the referenced TMDL, which assigns a WLA to the facility for nitrate.

iii. **Category 5 for dissolved oxygen (DO) and ammonia nitrogen (NH_3-N) with low priority**. Waterbodies in Category 5 are defined as "impaired, or one or more water quality standards are not attained." Per the impairment, the aquatic life designated use for Whig Creek is not supported. Based on the water quality model, the permit limits for DO and NH_3-N are protective of the downstream criteria for the given parameters. Therefore, no additional permit action is necessary at this time.

B. Applicable Total Maximum Daily Load (TMDL) Reports

The receiving stream, Whig Creek (AR_11110203_931), is included in the following TMDL reports:

i. **"Whig Creek TMDL for Nitrate"** dated December 8, 2000: assigns a WLA of 542.0 lb/day for nitrate (NO_3-N) to the facility. The WLA is incorporated into the permit as a monthly average mass limit of the same value.

ii. **"Whig Creek Basin TMDL for Copper"** dated November 1, 2003: assigns a WLA of 0.188 lbs/day for dissolved copper to the facility. Based on 40 C.F.R. §

122.45(c), metal limits in NPDES permits must be expressed in terms of total recoverable metal. Therefore, the WLA for dissolved copper was converted to a value of 0.45 lbs/day of Total Copper, using the Translator Mechanism established in Appendix D, Attachment V.III of the 2000 CPP for incorporation into the permit.

Effluent limitations based on the loadings established in the two TMDLs were included in previous permits and will be continued in the permit.

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.

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 revoke and reissue application for the individual discharge permit, as well as the state construction permit application, including modifications to the facility's treatment system:

A. Design Flow:

a. Tier I: 7.3 MGD

b. Tier II: 8.5 MGD

B. Type of Treatment:

a. Tier I: three (3) aerated flow equalization basins, bar screens, grit removal, three (3) primary clarifiers, three (3) extended aeration activated sludge basins, three (3) final clarifiers, two (2) chlorine contact basins, dechlorination, and aerobic digestion

b. Tier II: bar screens, grit removal, three (3) aerated flow equalization basins, anaerobic selector, four (4) activated sludge aeration basins, three (3) final clarifiers, peracetic acid (PAA) disinfection, and aerobic sludge holding tanks

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 C.F.R. § 403.3(v). Based on the facility's effluent compliance history and the type of industrial contributions, standard Pretreatment Program implementation conditions are deemed appropriate at this time.

11. SEWAGE SLUDGE AND BIOSOLIDS PRACTICES

The sludge produced at the treatment plant will be converted to Exceptional Quality (EQ) Class A biosolids through the facility's sludge pasteurization system. The biosolids are hauled by others to various permitted land application sites and may be sold or given away in bags or other containers in accordance with 40 C.F.R. Part 503. Certification of EQ Class A biosolids is under the authority of EPA Region VI.

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 C.F.R. Parts 122, 124, and Subchapter N), the National Pretreatment Regulation in 40 C.F.R. Part 403 and regulations 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 C.F.R. § 124.7.

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

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

Tier I								
Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Final 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
$CBOD_5$								
(May – October)	10	15	25	40	10.0	15.0	10	15
(November – April)	15	23	25	40	15.0	22.5	15	23
TSS								
(May – October)	15.0*	N/A	30	45	15.0	22.5	15.0	22.5
(November – April)	20.0*	N/A	30	45	20.0	30.0	20.0	30.0
NH_3-N								
(April – October)	2.2	5.6	N/A	N/A	2.2	5.6	2.2	5.6
(November – March)	4.0	6.0	N/A	N/A	4.0	6.0	4.0	6.0
DO	6.0 (Inst. Min.)		N/A		6.0 (Inst. Min.)		6.0 (Inst. Min.)	
FCB (col/100 ml)	1000	2000	N/A	N/A	1000	2000	1000	2000
TRC	0.011 (Inst. Max.)		N/A		0.011 (Inst. Max.)		0.011 (Inst. Max.)	
PAA	N/A		1.0 (Inst. Max.)		N/A		1.0 (Inst. Max.)	
NO_3-N	10.0	15.0	Report	Report	10.0	15.0	10.0	15.0
Arsenic, Total Rec.	N/A	N/A	Report	Report	Report	Report	Report	Report
Copper, Total Rec.	9.2 µg/l	18.5 µg/l	N/A	N/A	9.2 µg/l	18.5 µg/l	9.2 µg/l	18.5 µg/l
Mercury, Total Rec.	0.0134 µg/l	0.0269 µg/l	N/A	N/A	0.0134 µg/l	0.0269 µg/l	0.0134 µg/l	0.0269 µg/l
Zinc, Total Rec.	85.5 µg/l	171.6 µg/l	N/A	N/A	85.5 µg/l	171.6 µg/l	85.5 µg/l	171.6 µg/l
Pentachlorophenol	N/A	N/A	Report	Report	N/A	N/A	Report	Report
TP	N/A	N/A	Report	Report	N/A	N/A	Report	Report
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.	
Chronic WET Limits (*P. promelas*)	7-Day Minimum Lethality Not < 100 %		N/A		Report		7-Day Minimum Lethality Not < 100 %	
	7-Day Minimum Sub-Lethality Not < 80 %		N/A		Report		7-Day Minimum Sub-Lethality Not < 80 %	
Chronic WET Testing (*C. dubia*)	N/A		Report		Report		Report	

*TSS indirectly modeled by Sediment Oxygen Demand (SOD)

Tier II								
Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Final 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
$CBOD_5$								
(May – October)	10	15	25	40	10.0	15.0	10	15
(November – April)	9.0	14	25	40	15.0	22.5	9.0	14
TSS								
(May – October)	15.0*	N/A	30	45	15.0	22.5	15.0	22.5
(November – April)	20.0*	N/A	30	45	20.0	30.0	20.0	30.0
NH_3-N								
(April – October)	2.2	3.3	N/A	N/A	2.2	5.6	2.2	3.3
(November – March)	2.2	3.3	N/A	N/A	4.0	6.0	2.2	3.3
DO	6.0 (Inst. Min.)		N/A		6.0 (Inst. Min.)		6.0 (Inst. Min.)	
FCB (col/100 ml)	1000	2000	N/A	N/A	1000	2000	1000	2000
PAA	N/A		1.0 (Inst. Max.)		N/A		1.0 (Inst. Max.)	
NO_3-N	10.0	15.0	Report	Report	10.0	15.0	10.0	15.0
Arsenic, Total Rec.	N/A	N/A	Report	Report	Report	Report	Report	Report
Copper, Total Rec.	9.2 µg/l	18.5 µg/l	N/A	N/A	9.2 µg/l	18.5 µg/l	9.2 µg/l	18.5 µg/l
Mercury, Total Rec.	0.0134 µg/l	0.0269 µg/l	N/A	N/A	0.0134 µg/l	0.0269 µg/l	0.0134 µg/l	0.0269 µg/l
Zinc, Total Rec.	85.5 µg/l	171.6 µg/l	N/A	N/A	85.5 µg/l	171.6 µg/l	85.5 µg/l	171.6 µg/l
Pentachlorophenol	N/A	N/A	Report	Report	N/A	N/A	Report	Report
TP	N/A	N/A	Report	Report	N/A	N/A	Report	Report
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.	
Chronic WET Limits (*P. promelas*)	7-Day Minimum Lethality Not < 100 %		N/A		Report		7-Day Minimum Lethality Not < 100 %	
	7-Day Minimum Sub-Lethality Not < 80 %		N/A		Report		7-Day Minimum Sub-Lethality Not < 80 %	
Chronic WET Testing (*C. dubia*)	N/A		Report		Report		Report	

*TSS indirectly modeled by Sediment Oxygen Demand (SOD)

A. **Justification for Limitations and Conditions of the Final Permit**

Tier I		
Parameter	Water Quality or Technology	Justification
$CBOD_5$	Water Quality	Water Quality Model dated October 2, 2015, CWA § 402(o), and previous permit
TSS	Water Quality	Water Quality Model dated October 2, 2015, CWA § 402(o), and previous permit
NH_3-N	Water Quality	Rule 2.512, Water Quality Model dated October 2, 2015, CWA § 402(o), and previous permit
DO	Water Quality	Rule 2.505, Water Quality Model dated October 2, 2015, 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
PAA	Water Quality	EPA FIFRA label for PeroxyChem VigorOx WWT, NPDES permits AR0037907 and AR0034380
NO_3-N	Water Quality	"Whig Creek TMDL for Nitrate" dated December 8, 2000, CWA § 402(o), and previous permit
Arsenic, Total Rec.	Water Quality	CPP (Appendix D, Implementation Procedures for Toxic Substances), CWA § 402(o), and previous permit
Copper, Total Rec.	Water Quality	"Whig Creek Basin TMDL for Copper" dated November 1, 2003, Rule 2.508, CWA § 402(o), and previous permit
Mercury, Total Rec.	Water Quality	Rule 2.508, CWA § 402(o), and previous permit
Zinc, Total Rec.	Water Quality	Rule 2.508, CWA § 402(o), and previous permit
Pentachlorophenol	Technology	CPP (Appendix D, Implementation Procedures for Toxic Substances)
TP	Technology	CPP (Appendix D, Nutrient Control Implementation Plan)
NO_3+NO_2-N	Technology	CPP (Appendix D, Nutrient Control Implementation Plan)
pH	Water Quality	Rule 2.504, CWA § 402(o), and previous permit
Chronic WET Testing/Limit	Technology	CPP Appendix D (page D-27), CPP Attachment X

Tier II		
Parameter	Water Quality or Technology	Justification
$CBOD_5$	Water Quality	Water Quality Model dated March 14, 2022, CWA § 402(o), and previous permit
TSS	Water Quality	Water Quality Model dated March 14, 2022, CWA § 402(o), and previous permit
NH_3-N	Water Quality	Rule 2.512, Water Quality Model dated March 14, 2022, CWA § 402(o), and previous permit
DO	Water Quality	Rule 2.505, Water Quality Model dated March 14, 2022, CWA § 402(o), and previous permit
FCB	Water Quality	Rule 2.507, CWA § 402(o), and previous permit

Tier II		
Parameter	Water Quality or Technology	Justification
PAA	Water Quality	EPA FIFRA label for PeroxyChem VigorOx WWT II, NPDES permits AR0037907 and AR0034380
NO_3-N	Water Quality	"Whig Creek TMDL for Nitrate" dated December 8, 2000, CWA § 402(o), and previous permit
Arsenic, Total Rec.	Water Quality	CPP (Appendix D, Implementation Procedures for Toxic Substances), CWA § 402(o), and previous permit
Copper, Total Rec.	Water Quality	"Whig Creek Basin TMDL for Copper" dated November 1, 2003, Rule 2.508, CWA § 402(o), and previous permit
Mercury, Total Rec.	Water Quality	Rule 2.508, CWA § 402(o), and previous permit
Zinc, Total Rec.	Water Quality	Rule 2.508, CWA § 402(o), and previous permit
Pentachlorophenol	Technology	CPP (Appendix D, Implementation Procedures for Toxic Substances)
TP	Technology	CPP (Appendix D, Nutrient Control Implementation Plan)
NO_3+NO_2-N	Technology	CPP (Appendix D, Nutrient Control Implementation Plan)
pH	Water Quality	Rule 2.504, CWA § 402(o), and previous permit
Chronic WET Testing/Limit	Technology	CPP Appendix D (page D-27), CPP Attachment X

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) – Tier II

Based on an updated modeling analysis dated March 14, 2022, the $CBOD_5$ concentration limits during November through April were updated; the Monthly Average limit was updated from 15.0 mg/l to 9.0 mg/l, and the 7-Day Average limit was updated from 22.5 mg/l to 14 mg/l.

The updated model was performed with updated stream hydraulics and to account for the facility's design flow increase from 7.3 MGD to 8.5 MGD. The referenced limits were updated to remain in accordance with dissolved oxygen water quality criteria.

Ammonia Nitrogen (NH_3-N) – Tier II

Based on an updated modeling analysis dated March 14, 2022, the NH_3-N concentration limits were updated. The Monthly Average limit during November through March was updated from 4.0 mg/l to 2.2 mg/l, and the 7-Day Average limit was updated from 6.0 mg/l to 3.3 mg/l. The 7-Day Average limit during April through October was updated from 5.6 mg/l to 3.3 mg/l.

The updated model was performed with updated stream hydraulics and to account for the facility's design flow increase from 7.3 MGD to 8.5 MGD. The referenced limits were updated to remain in accordance with dissolved oxygen water quality criteria.

Residual Peracetic Acid (PAA)

PAA will be used for disinfection at the facility. Since the receiving stream, Whig Creek, has a critical flow (7Q10) of zero, the residual PAA limit must be met at the end of pipe.

There is limited water quality-based toxicity data for PAA. At least 8 quarters of WET testing are required before any WET testing frequency reduction can be granted in order to evaluate potential aquatic toxicity effects of PAA. See Section 14 of this Fact Sheet for additional details regarding WET testing.

The residual PAA instantaneous maximum limit of 1.0 mg/l is based on the EPA FIFRA label for PeroxyChem VigorOx WWT II, the PAA product used at the facility. This limit is consistent with the residual PAA limits in NPDES permits AR0037907 and AR0034380, which cover other facilities that use PAA disinfection and discharge to receiving streams with 7Q10 flows of zero.

The PAA monitoring requirements and instantaneous maximum limit are applicable during the Tier II requirements as shown in Part I.A.2 of the permit.

Total Phosphorus (TP) & Nitrate + Nitrite – Nitrogen (NO_3+NO_2-N)

The existing statewide, ambient, water quality monitoring network provides in-stream nutrient concentration data and loading data based on monitored flow. In order to establish a database of point source loadings of nutrients to waters of the state, major municipal facilities will include nutrient monitoring for Nitrate + Nitrite – Nitrogen and Total Phosphorus based on the Nutrient Control Implementation Plan in Appendix D of CPP (Page D-9).

Pentachlorophenol

A monitoring and reporting requirement for Pentachlorophenol was added based on the Priority Pollutant Scan evaluation. See Section 12.E of this Fact Sheet for details.

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 C.F.R. § 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 C.F.R. § 122.44(l)(2)(i).

The permit meets or exceeds the requirements of the previous permit, with the exception of the TRC concentration limit and all Tier II mass limits except for NO_3-N and Copper. TRC requirements will be removed from the permit once Tier II is in effect since the permittee is removing chlorine disinfection from the facility's treatment system. The Tier II mass limits (all parameters except NO_3-N and Copper) are calculated based on the formula in Section 12.C.1 below using the Tier II design flow of 8.5 MGD. These modifications represent a material and substantial alteration or addition to the permitted

facility that occurred after permit issuance, which is an allowable exception to backsliding pursuant to CWA 402(o)(2).

C. **Limits Calculations**

1. Mass Limits:

In accordance with 40 C.F.R. § 122.45(f)(1), all pollutants limited in permits shall have limitations expressed in terms of mass if feasible. 40 C.F.R. § 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 7.3 MGD for Tier I (Part I.A.1 of the permit) and 8.5 MGD for Tier II (Part I.A.2 of the permit) in the following equation:

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

The mass limit for NO_3-N is based on a wasteload allocation in the TMDL titled "Whig Creek TMDL for Nitrate" dated December 8, 2000, and the mass limit for Copper is based on a wasteload allocation in the TMDL titled "Whig Creek Basin TMDL for Copper" dated November 1, 2003 as discussed in Section 7.B of this Fact Sheet.

2. 7-Day Average Limits:

The 7-day average limits for $CBOD_5$, TSS, NH_3-N (November – March during Tier I and year-round during Tier II) and NO_3-N 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 (April – October during Tier I) limits are based on the requirements of Rule 2.512.

The 7-Day average limit for FCB is based on Rule 2.507.

The 7-Day average limits for Copper, Mercury, and Zinc are based on the CPP.

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.

Based on an updated water quality model dated March 14, 2022, the following 208 Plan updates are being made with this permit renewal:

1. The monthly average $CBOD_5$ limit during November through April is being revised from 15 to 9.0 mg/l.
2. The monthly average NH_3-N limit during November through March is being revised from 4 to 2.2 mg/l.
3. A year-round instantaneous maximum PAA limit of 1.0 mg/l is being added.
4. The facility design flow is being revised from 7.3 to 8.5 MGD.

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 C.F.R. § 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 C.F.R. § 122.45(c).The following items were used in calculations:

Parameter	Value	Source
Discharge Flow = Q	8.5 MGD = 13.2 cfs	Application
Critical Flow, 7Q10	0 cfs	USGS StreamStats
Harmonic Mean Flow	0.092 cfs	USGS StreamStats
TSS	3 mg/l	CPP, Attachment V
Hardness as $CaCO_3$	25 mg/l	CPP, Attachment VI
pH	7.0 s.u.	Assumed
Q_b background flow, Mixing zone flow for chronic toxicity	0.67 (67%, since 7Q10 < 100 cfs)	Rule 2.508 and CPP-Appendix D
Q_b background flow, ZID flow for acute toxicity	0.33 (33%, since 7Q10 < 100 cfs)	Rule 2.508 and CPP-Appendix D

The following pollutants were reported above detection levels:

Pollutant	Concentration Reported, µg/l	Number of Samples	MQL, µg/l
Arsenic, Total Recoverable	2.11 [1]	18	0.5

[1] Geometric mean of fewer than 20 samples. If a sample was below the detection limit and the sample met the required MQL, one-half of the detection limit was used for that sample when calculating the geometric mean, in accordance

Pollutant	Concentration Reported, µg/l	Number of Samples	MQL, µg/l
Copper, Total Recoverable	27 [2]	≥53	0.5
Lead, Total Recoverable	0.27 [1]	17	0.5
Mercury, Total Recoverable	0.058 [2]	≥53	0.005
Nickel, Total Recoverable	4.34 [1]	17	0.5
Zinc, Total Recoverable	290 [2]	≥53	20
Phenols, Total Recoverable	4.93 [1]	19	5
Chloroform	2.91 [1]	5	10 [3]
Pentachlorophenol	2.92 [1]	5	5
Phenol	3.87 [1]	5	10 [3]

Copper, Mercury, and Zinc were not further evaluated because the permit already contains limits for these parameters. For the remaining parameters, 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:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0021768_PPS_20220822.pdf

1. **Aquatic Toxicity Evaluation**

   a. Acute Criteria Evaluation

Pollutant	Concentration Reported (C_e) µg/l	(C_e × 2.13) [4]	Instream Waste Concentration (IWC)	Criteria [5]	Reasonable Potential (Yes/No)
			Acute, µg/l	Acute, µg/l	
Lead, Total Recoverable	0.27	0.58	0.58	62	No
Nickel, Total Recoverable	4.34	9.2	9.2	782	No
Pentachlorophenol	2.92	6.2	6.2	8.7	No

with Appendix D of the CPP. Samples that were below the detection limit and did not meet the required MQL were not considered for this evaluation.

[2] Highest reported value in the available data from May 2017 through September 2021. This includes at least 53 total data points from facility DMRs, annual pretreatment reports, and lab reports submitted as part of the permit renewal application.

[3] Required MQL. The achieved MQL was lower for some samples.

[4] Statistical ratio used to estimate the 95th percentile using a single effluent concentration or the geometric mean of a dataset.

[5] Criteria are from Rule 2.508, unless otherwise specified.

b. Chronic Criteria Evaluation

Pollutant	Concentration Reported (C_e) µg/l	(C_e × 2.13) [4]	Instream Waste Concentration (IWC)	Criteria [5]	Reasonable Potential (Yes/No)
			Chronic, µg/l	Chronic, µg/l	
Lead, Total Recoverable	0.27	0.58	0.58	2.4	No
Nickel, Total Recoverable	4.34	9.2	9.2	87	No
Pentachlorophenol	2.92	6.2	6.2	6.7	No

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

Pollutant	Concentration Reported (C_e) µg/l	(C_e × 2.13) [4]	Instream Waste Concentration (IWC) µg/l	Criteria [6]	Reasonable Potential (Yes/No)
Arsenic, Total Recoverable	2.11	4.5	4.5	1.4	Yes
Phenols, Total Recoverable	4.93	11	10	-	No
Chloroform	2.84	6.0	6.0	20,000	No
Phenol	3.87	8.2	8.2	300 [7]	No
Pentachlorophenol	2.92	6.2	6.2	0.4	Yes

3. **Human Health (Drinking Water) Evaluation**

Pollutant	Concentration Reported (C_e) µg/l	(C_e × 2.13) [4]	Instream Waste Concentration (IWC) µg/l	Criteria [8]	Reasonable Potential (Yes/No)
Pentachlorophenol	2.92	6.2	6.2	1.0	Yes

Pentachlorophenol

As can be seen in the tables above, the calculated IWC for Pentachlorophenol was sufficiently higher than the Maximum Contaminant Level (MCL) specified in the

[6] Unless otherwise noted, criteria are adapted from "National Recommended Water Quality Criteria – Human Health Criteria Table", EPA. The respective WQC from the noted reference is the Consumption of Organism Only value. The value from the reference is for a lifetime risk factor of 10^{-6}. This value has been multiplied by 10 to correspond to the human health criteria lifetime risk factor of 10^{-5} as stated in Rule 2.508.

[7] Adapted from "National Recommended Water Quality Criteria – Organoleptic Effects", EPA. Out of all types of criteria provided by EPA, including human health and aquatic life criteria, this organoleptic criterion is the most stringent.

[8] Maximum Contaminant Level (MCL) specified in the National Primary Drinking Water Regulations.

National Primary Drinking Water Regulations. Considering that Pentachlorophenol was detected in only one of the five samples, and this sample result was 5.4 µg/l with an MQL of 5 µg/l, the Division is requiring monitoring and reporting only to further evaluate if Pentachlorophenol is present in the facility's effluent. In accordance with Part II.3 of the permit, this permit may be reopened if monitoring results indicate that discharges from this facility may be causing or contributing an exceedance of the drinking water MCL in the receiving stream.

Total Recoverable Arsenic

As can be seen in the table above, the calculated IWC for Arsenic is higher than the EPA Water Quality Criterion. A.C.A. § 8-4-216 authorizes the Division to require the submission of any information relevant to meeting the requirements of the Arkansas Water and Air Pollution Control Act. A requirement to monitor and report for Arsenic once per quarter for one year has been added to the permit so that, in the event that a WQS for Arsenic is added to Rule 2.508, data will be available to perform a reasonable potential analysis. This is in accordance with the procedure in Appendix D of the CPP (Appendix D, Part IV – Chemical Specific Standards and Criteria, Section E – Protection of Human Health Criteria of the Discharge Permit, Toxic Control Implementation Procedure).

The CPP requires that for all pollutants for which there are no applicable state water standards, IWCs are to be compared with the EPA Human Health Criteria (fish consumption only). If dilution calculations show that the in-stream concentration exceeds these criteria, the permit will require the permittee to monitor and report for the pollutant of concern once per quarter for one year only. A reopener clause has been included in the permit (see Part II.3) to provide permit limits if state water quality standards are developed for the applicable pollutants, and the data shows that there is a reasonable potential for the discharge to violate those water quality standards.

13. TOTAL RESIDUAL CHLORINE (TRC) REQUIREMENTS

TRC requirements are only applicable during Tier I effluent limitations and monitoring requirements, as shown in Part I.A.1 of the permit.

EPA considers concentrations at the edge of the mixing zone higher than 0.011 mg/l (Chronic Criteria) to be toxic to aquatic organisms. Since the receiving stream has a 7Q10 of 0 cfs, the EPA criteria must be included as an end of pipe 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.

14. **WHOLE EFFLUENT TOXICITY**

A. *P. promelas* WET limits

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..." To ensure that the CWA's prohibitions for toxics are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants (49 FR 9016-9019, 3/9/84)." In support of the national policy, Region 6 adopted the "Policy for Post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992. In addition, DEQ is required under 40 C.F.R. §122.44(d)(1), adopted by reference in Rule 6, to include conditions as necessary to achieve water quality standards as established under Section 303 of the Clean Water Act.

The Regional policy and strategy are designed to ensure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State Water Quality Standard (WQS) resulting in non-conformance with the provisions of 40 C.F.R. §122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

Whole effluent toxicity (WET) testing has been established for assessing and protecting against impacts upon water quality and designated uses caused by the aggregate toxic effect of the discharge of pollutants. The stipulated test species, which are appropriate to measure whole effluent toxicity, are consistent with the requirements of the State Water Quality Standards. The WET testing frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 C.F.R. §122.48.

Implementation

Arkansas has established a narrative water quality standard under the authority of Section 303 of the CWA 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 testing conducted by the permittee has shown potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or waterbody, at the appropriate instream critical dilution. Pursuant to 40 C.F.R. §122.44(d)(1)(v), DEQ has determined from the permittee's self reporting that the discharge from this facility does have the reasonable potential to cause, or contribute to an instream excursion above the narrative standard within the applicable State Water Quality Standards, in violation of Section 101(a)(3) of the Clean Water Act. Therefore, the permit must establish effluent limitations for lethality and sub-lethality following Regulations promulgated by 40 C.F.R. §122.44(d)(1)(v). These effluent limitations for lethality and sub-lethality (7-day NOEC) are applied at Outfall **001** effective **three years after the effective date of the permit**. **[**Prior to **three years after the effective date of the permit**, the permit requires monitoring and reporting only for lethality and sub-lethality with no limitations being established. For

Outfall **001**, the 7-day NOEC value for lethality shall not be less than **100**% (Critical Dilution) effluent and the sub-lethality 7-day NOEC value shall not be less than **80**% (Critical Dilution).WET testing of the effluent is thereby required as a condition of this permit to assess potential toxicity. The WET testing procedures stipulated as a condition of this permit are in Section 14.C of this Fact Sheet.

B. *C. dubia* WET Testing

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 C.F.R. § 122.44(d)(1), adopted by reference in Rule 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 in Section 14.C of this Fact Sheet.

C. WET Testing Procedures

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:

$$\text{Critical dilution (CD)} = \left(\frac{Q_d}{Q_d + Q_b}\right) \times 100$$

$$Q_d = \text{design flow or average flow} = 8.5 \text{ MGD} = 13.2 \text{ cfs}$$

$$7Q10 = 0 \text{ cfs}$$

$$Q_b = \text{background flow} = \left(\frac{0.25}{0.67}\right) \times 7\text{Q10} = \left(\frac{0.25}{0.67}\right) \times 0 = 0 \text{ cfs}$$

$$\text{Critical dilution (CD)} = \left(\frac{13.2}{13.2 + 0}\right) \times 100 = 100\%$$

Toxicity tests shall be performed in accordance with protocols described in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-91/002, July 1994. A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are **32%, 42%, 56%, 80%, 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 C.F.R. § 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 C.F.R. § 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:	AR0021768	AFIN:	58-00105	Outfall Number:	001
Date of Review:	12/6/2022	Reviewer:	M. Barnett		
Facility Name:	City Corporation - Russellville Water & Sewer System				
Previous Dilution series:	32, 42, 56, 75, 100	Proposed Dilution Series:	32, 42, 56, 80, 100		
Previous Critical Dilution:	100	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	Sub-Lethal	Lethal	Sub-Lethal	
	NOEC	NOEC	NOEC	NOEC	
6/30/2018	100	100	100	100	
12/31/2018	100	100	100	100	
6/30/2019	100	100	100	100	
12/31/2019	100	100	100	100	
6/30/2020	100	100	100	100	
8/31/2020	**75**	**75**	100	100	
9/30/2020	100	100			retest 1
10/31/2020	100	100			retest 2
11/30/2020	100	100	100	100	retest 3
6/30/2021	100	100	100	100	
9/30/2021	100	100	100	100	
12/31/2021	100	100	100	100	
3/31/2022	**56**	**56**	100	100	
4/30/2022	100	100			retest 1
5/30/2022	100	100			retest 2
6/30/2022	100	100	100	100	retest 3
9/30/2022	100	100	100	100	
12/31/2022	100	100	100	100	

Failures noted in BOLD

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	**Vertebrate Sub-lethal**	**Invertebrate Lethal**	**Invertebrate Sub-Lethal**
Min NOEC Observed	56	56	100	100
TU at Min Observed	1.79	1.79	1.00	1.00
Count	18	18	14	14
Failure Count	2	2	0	0
Mean	1.062	1.062	1.000	1.000
Std. Dev.	0.197	0.197	0.000	0.000
CV	0.2	0.2	0	0
RPMF	1.1	1.1	0	0
Reasonable Potential	1.964	1.964	0.000	0.000
100/Critical dilution	1.000	1.000	1.000	1.000
Does Reasonable Potential Exist	Yes	Yes	No	No

PERMIT ACTION

P. promelas Chronic -51714 Limits: Lethal not <100%; Sub-Lethal not <80%; 3 year compliance schedule
C. dubia Chronic - Monitor

P. promelas

Reasonable potential exists for lethal and sub-lethal endpoints. WET limits with a 3-year schedule of compliance have been included.

15. STORMWATER REQUIREMENTS

The federal regulations at 40 C.F.R. § 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 C.F.R. § 122.26(g) if several conditions can be certified. This facility was issued stormwater permit coverage under NPDES Tracking number ARR000104.

16. SAMPLE TYPE AND FREQUENCY

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

Requirements for sample type and sampling frequency for all existing parameters have been based on the previous discharge permit. The sample type and frequency for PAA are based on the requirements for TRC and FCB, and the sample type and frequency for TP, NO_3+NO_2-N, and Pentachlorophenol are based on the requirements for metals.

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Flow	once/day	totalizing meter	once/day	totalizing meter
$CBOD_5$	once/weekday	composite	once/weekday	composite
TSS	once/weekday	composite	once/weekday	composite
NH_3-N	once/weekday	composite	once/weekday	composite
DO	once/weekday	grab	once/weekday	grab
FCB	once/weekday	grab	once/weekday	grab
TRC[9]	once/weekday	grab	once/weekday	grab
PAA	N/A	N/A	once/weekday	grab
NO_3-N	once/weekday	composite	once/weekday	composite
Arsenic, Total Rec.	once/quarter[10]	composite	once/quarter[10]	composite
Copper, Total Rec.	once/month	composite	once/month	composite
Mercury, Total Rec.	once/month	composite	once/month	composite
Zinc, Total Rec.	once/month	composite	once/month	composite
Pentachlorophenol	N/A	N/A	once/month	composite

[9] TRC requirements are only applicable during Tier I limits, as shown in Part I.A.1.
[10] Total Recoverable Arsenic monitoring is only required for the first 4 quarters of the permit.

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
TP	N/A	N/A	once/month	composite
NO_3+NO_2-N	N/A	N/A	once/month	composite
pH	once/weekday	grab	once/weekday	grab
Chronic WET Testing	once/quarter	composite	once/quarter	composite

17. **PERMIT COMPLIANCE SCHEDULE**

A Schedule of Compliance has been included in this permit for the facility's pretreatment program. The permittee shall submit 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. A written notification that a technical evaluation revising the current TBLLs will be submitted. Compliance with all permit requirements is required in accordance with the schedule provided in Part I.B of the permit.

A Schedule of Compliance has also been included in this permit for *P. promelas* Chronic WET Limits. Compliance with all permit requirements is required in accordance with the schedule provided in Part IB of the permit. The Division has chosen to exercise its discretion provided for in Rule 2 to allow a 3 year Schedule of Compliance for the new *P. promelas* Chronic WET Limits.

18. **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.

19. **SOURCES**

The following sources were used to draft the permit:

A. Application No. AR0021768 received September 28, 2020, with all additional information received by March 22, 2022.
B. Additional effluent data received August 17, 2022 and August 18, 2022.
C. Arkansas Water Quality Management Plan (WQMP).
D. APC&EC Rule 2.
E. APC&EC Rule 3.
F. 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.
G. 40 C.F.R. Parts 122, 125, 133, and 403.
H. Discharge permit file AR0021768.
I. Discharge Monitoring Reports (DMRs).
J. "2018 Integrated Water Quality Monitoring and Assessment Report," DEQ.
K. "2018 List of Impaired Waterbodies (303(d) List)," DEQ, May 2020.

L. "Whig Creek TMDL for Nitrate" dated December 8, 2000.
M. "Whig Creek Basin TMDL for Copper" dated November 1, 2003.
N. USGS StreamStats web-based program.
O. Continuing Planning Process (CPP).
P. Technical Support Document for Water Quality-based Toxic Control.
Q. CAO LIS 09-146-001.
R. NPDES Individual Discharge Permit AR0037907 effective September 1, 2019.
S. Inspection Report dated May 27, 2021.
T. Compliance Review dated June 4, 2021.
U. Additional Technical Information dated July 16, 2021.
V. Planning Review dated July 19, 2021.
W. AR0021768C Arkansas Department of Health Approval Letter dated July 19, 2021.
X. AR0021768C Application Technical Review dated July 22, 2021.
Y. NPDES Individual Discharge Permit AR0034380 effective October 1, 2021.
Z. Priority Pollutant Scan (PPS) Spreadsheet dated August 22, 2022.
AA. City Corporation Renewal Permit Limits Response Email dated March 10, 2022.
BB. Water Quality Model dated October 2, 2015.
CC. Water Quality Model dated March 14, 2022.
DD. PAA Product Confirmation Email dated March 22, 2022.
EE. Operator License Class Spreadsheet dated March 22, 2022.
FF. PeroxyChem VigorOx WWT II EPA FIFRA Label.

20. PUBLIC NOTICE

The public notice of the draft permit was published for public comment on April 9, 2023. The last day of the comment period was thirty (30) days after the publication date. No public comments were received on the draft permit.

A copy 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 Arkansas Department of Parks, Heritage, and Tourism, the EPA, and the Arkansas Department of Health.

21. 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 × (8.5-1)) = \$11,750

The facility is billed under Fee Code M for major municipal dischargers.

22. **POINT OF CONTACT**

For additional information, contact:

Zachary Carroll, PhD, P.E.
Permits Branch, Office of Water Quality
Division of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317
Telephone: (501) 682-0625
Email: zachary.carroll@adeq.state.ar.us

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]													
[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 C.F.R. 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 C.F.R. 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 C.F.R. # 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: _____