

ADEQ

A R K A N S A S
Department of Environmental Quality

APR 24 2014

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (91 7199 9991 7030 4906 4704)

Honorable Billy Ray Jones
Mayor, City of Nashville
426 North Main Street
Nashville, AR 71852

RE: Discharge Permit Number AR0021776, AFIN 31-00036

Dear Mayor Jones:

Enclosed are the public notice, a copy of the draft permit and Fact Sheet which the Arkansas Department of Environmental Quality (ADEQ) has prepared and mailed to you on the above date under the authority of the National Pollutant Discharge Elimination System (NPDES) and the Arkansas Water and Air Pollution Control Act. A copy of the final permit will be mailed to you when the Department has made a final permitting decision.

In accordance with Reg. 8.207, the enclosed public notice will be or has been published by ADEQ in a newspaper of general circulation of your facility for one (1) day only. An invoice for the cost of publishing the public notice and proof of publication will be sent to you by the advertising newspaper. The permittee must send proof of publication and proof of payment to the address at the bottom of this letter as soon as possible but no later than 30 days from the above date. Until this Department receives proof of publication of the public notice and payment of all permit fees, no further action will be taken on the issuance of your discharge permit.

For a list of changes, please see Section 5 of the enclosed Fact Sheet. Comments must be received at ADEQ prior to the close of the public comment period as described in the enclosed public notice. Once a final permit is issued by the Director and becomes effective, the permittee must comply with all terms and conditions of the permit, or be subject to enforcement actions for any instances of noncompliance during the duration of the permit, usually five (5) years. Consequently, it is imperative that you, as the applicant, thoroughly review the enclosed documentation for accuracy, applicability, and your ability to comply with all conditions therein.

Should you have any questions concerning any part of the draft permit, please contact Loretta Reiber, P.E. at (501) 682-0612.

Sincerely,


Ellen Carpenter
Chief, Water Division

EC:lr

Enclosure

PUBLIC NOTICE OF DRAFT DISCHARGE PERMIT
AND 208 Plan
PERMIT NUMBER AR0021776, AFIN 31-00036

This is to give notice that the Arkansas Department of Environmental Quality (ADEQ), Water Division, 5301 Northshore Drive, North Little Rock, Arkansas 72118-5317 at telephone number (501) 682-0622, proposes a draft renewal of the permit number AR0021776 for which an application was received on 5/6/2013 with all additional information submitted by 7/3/2013 for the following applicant under the National Pollutant Discharge Elimination System (NPDES) and the Arkansas Water and Air Pollution Control Act.

Applicant: City of Nashville, 743 Highway 27 South, Nashville, AR 71852. Location: South side of highway near junction with Highway 27B; Latitude: 33° 55' 11.26"; Longitude: 93° 51' 40.16" in Howard County, Arkansas. The discharge of treated municipal wastewater is through an 18" pipe to Mine Creek, thence to Millwood Lake, thence to the Red River in Segment 1C of the Red River Basin.

The 208 Plan, developed by the ADEQ under provisions of Section 208 of the federal Clean Water Act, is a comprehensive program to work toward achieving federal water goals in Arkansas. The initial 208 Plan, adopted in 1979, provides for annual updates, but can be revised more often if necessary. The 208 Plan has been revised to change the NH₃-N limit for the month of April to 2.57 mg/l. The future design flow of 3.5 MGD will also be added to the 208 Plan. These changes have been incorporated into the permit.

ADEQ's contact person for submitting written comments, requesting information regarding the draft permit, or obtaining a copy of the permit and the Fact Sheet is Loretta Reiber, P.E., at the above address and telephone number or by email at Water-Draft-Permit-Comment@adeq.state.ar.us. For those with Internet access, a copy of the proposed draft permit as well as the publication date may be found on the ADEQ's website at: http://www.adeq.state.ar.us/water/branch_permits/individual_permits/pn_permits/pnpermits.asp.

The comment period shall end at 4:30 P.M. (Central Time) on the 30th day after the publication date. If the last day of the comment period is a Saturday, Sunday or legal holiday, the public comment period shall expire on the next day that is not a Saturday, Sunday or legal holiday. For information regarding the actual publication date along with the actual date and time the comment period will end, please contact Loretta Reiber, P.E. at the above address and telephone number or by email at Water-Draft-Permit-Comment@adeq.state.ar.us. Public notice, comments, and hearings will be conducted in accordance with Regulation 6.104(A)(5) [40 CFR Parts 124.10 through 124.12 by reference] and Regulation 8.209 and 8.210 (Administrative Procedures). All persons, including the permittee, who wish to comment on ADEQ's draft permitting decision must submit written comments to ADEQ, along with their name and mailing address. A Public Hearing will be held when ADEQ finds a significant degree of public interest. After the public comment period, ADEQ will issue a final permitting decision. ADEQ will notify the applicant and each person who has submitted written comments or request notice of the final permitting decision. Any interested person who has submitted comments may appeal a final decision by ADEQ in accordance with the APCEC Regulation No. 8.603.

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Fact Sheet

This Fact Sheet is for information and justification of the permit limits only. Please note that it is not enforceable. This draft permitting decision is for renewal of the discharge Permit Number AR0021776 with Arkansas Department of Environmental Quality (ADEQ) Facility Identification Number (AFIN) 31-00036 to discharge to Waters of the State.

1. PERMITTING AUTHORITY.

The issuing office is:

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

2. APPLICANT.

The applicant's mailing address is:

City of Nashville
426 North Main Street
Nashville, AR 71852

The facility address is:

City of Nashville
743 Highway 27 South
Nashville, AR 71852

3. PREPARED BY.

The permit was prepared by:

Loretta Reiber, P.E.
Staff Engineer
Discharge Permits Section, Water Division
(501) 682-0612
E-mail: reiber@adeq.state.ar.us

Kimberly Fuller, P.E.
Engineer Supervisor
Discharge Permits Section, Water Division
(501) 682-0643
fuller@adeq.state.ar.us

4. PERMIT ACTIVITY.

Previous Permit Effective Date: 2/1/2009
Previous Permit Expiration Date: 1/31/2014

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The permittee submitted a permit renewal application on 5/6/2013 with all additional information submitted by 7/3/2013. It is proposed that the current discharge permit be reissued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 122.46(a).

On 3/27/2013, the Department issued State Construction Permit No. AR0021776C to the City of Nashville. This construction permit allows for the conversion of the stabilization pond into an equalization basin with a capacity of approximately 61,350,000 gallons, and installation of the following: two aeration basins with a total of 6 blowers (3 @ 150 hp and 3 @ 25 hp), two 67' clarifiers, sludge belt press, RAS pump station, WAS pump station, post aeration basin with a 15 hp blower, UV disinfection, and parshall flume. The two existing aerated lagoons will be aeration basins in the new activated sludge treatment plant. The modified treatment system will have a design flow of 3.5 MGD. The existing treatment plant is two aerated lagoons in parallel, thence into a two-cell stabilization pond, thence into a dissolved air flotation unit (DAF), followed by chlorination then dechlorination with a design flow of 2.3 MGD.

This renewal permit includes separate tables for limits at each of the design flows. Condition No. 11 of Part II sets forth conditions which must be met during the transition period.

DOCUMENT ABBREVIATIONS

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

BAT - best available technology economically achievable
BCT - best conventional pollutant control technology
BMP - best management practices
BOD₅ - five-day biochemical oxygen demand
BPJ - best professional judgment
BPT - best practicable control technology currently available
CBOD₅ - carbonaceous biochemical oxygen demand
CD - critical dilution
CFR - Code of Federal Regulations
cfs - cubic feet per second
COD - chemical oxygen demand
COE - United States Corp of Engineers
CPP - continuing planning process
CWA - Clean Water Act
DMR - discharge monitoring report
DO - dissolved oxygen
ELG - effluent limitation guidelines
EPA - United States Environmental Protection Agency
ESA - Endangered Species Act

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FCB - fecal coliform bacteria
gpm - gallons per minute
MGD - million gallons per day
MQL - minimum quantification level
NAICS - North American Industry Classification System
NH₃-N - ammonia nitrogen
NO₃ + NO₂-N - nitrate + nitrite nitrogen
NPDES - National Pollutant Discharge Elimination System
O&G - oil and grease
Reg. 2 - APCEC Regulation No. 2
Reg. 6 - APCEC Regulation No. 6
Reg. 8 - APCEC Regulation No. 8
Reg. 9 - APCEC Regulation No. 9
RP - reasonable potential
SIC - standard industrial classification
TDS - total dissolved solids
TMDL - total maximum daily load
TP - total phosphorus
TRC - total residual chlorine
TSS - total suspended solids
UAA - use attainability analysis
USF&WS - United States Fish and Wildlife Service
WET - Whole effluent toxicity
WQMP - water quality management plan
WQS - Water Quality standards
WWTP - wastewater treatment plant

DMR Review:

The Discharge Monitoring Reports (DMR's) for June 2010 through May 2013 were reviewed during the permit renewal process. The following violations were noted during the review of the DMR data: TRC (April 2013), Cyanide (CN) (December 2010), pH (June 2011 and April 2012), BOD₅ (January 2010 and October 2012), TSS (June 2011 and July 2011), and NH₃-N (May 2010, March 2011, May 2011, February 2012, March 2012, April 2012, September 2012, October 2012, January 2013, February 2013, March 2013, April 2013, and May 2013).

The permittee received State Construction Permit No. AR0021776C in March 2013 to convert the wastewater treatment plant to an activated sludge facility with UV disinfection. The recent non-compliance reports submitted to the Enforcement Branch of the Water Division have indicated that the NH₃-N issues will be resolved when the new treatment system is on-line.

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Legal Order Review:

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

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 monitoring location is now listed only in Part IA of the permit.
2. DO is now expressed as an instantaneous minimum.
3. Limits based on the new activated sludge plant design have been added to the permit.
4. The permittee is now required to test the CBOD5 and the TSS levels in the influent a minimum of once per year.
5. The Monthly Total number of Sanitary Sewer Overflows (SSOs) and the Monthly Total Volume of SSOs must be reported on the Discharge Monitoring Reports.
6. Condition No. 8 of Part II of the permit has been revised to add the new metals.
7. The NH3-N limits for the month of April have been revised based upon the corrected MultiSMP model and revised toxicity calculations.
8. A limit on the colonies per day of FCB has been added based on the applicable TMDL.

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION.

The outfall is located at the following coordinates based on the permit application and confirmed with Google Earth using WGS84:

Latitude: 33° 54' 56" Longitude: 93° 51' 28"

The receiving waters named:

through an 18" pipe to Mine Creek, thence to Millwood Lake, thence to the Red River in Segment 1C of the Red River Basin. The receiving stream with USGS Hydrologic Unit Code (H.U.C) of 11140109 and reach #933 is a Water of the State classified for primary and secondary contact recreation, raw water source for domestic (public and private), industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

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

A. **303(d) List:**

Reach 933 of Mine Creek is on the 2008 303(d) list Copper and Zinc in Category 5e as well as Dissolved Oxygen in Category 5f. Reach 033 of Mine Creek is on the 2008 303(d) for Sulfates and Pathogens in Category 5d.

Copper and Zinc limits have been added to the permit because the permittee demonstrated reasonable potential for violations of the water quality standards for those parameters. No further permit action is necessary.

The permit contains limits on oxygen-demanding parameters which were obtained from a MultiSMP model and are protective of the DO standard in the receiving stream. Therefore, no further permit action is necessary regarding the DO listing.

Category 5d contains those stream segments which are in need of additional data to verify the accuracy of the assessment. There is not sufficient data from this facility to determine if there is the reasonable potential for water quality violations due to the sulfate levels in their effluent. Sulfates requirements will not be included in the permit until sufficient data exists to include this stream segment on an EPA approved 303(d) list. The Department reserves the right to reopen the permit to include Sulfates in the event that the accuracy of the assessment is verified or a TMDL is developed.

A TMDL has been completed for pathogens in Mine Creek. See Item #13.A of this Fact Sheet for additional information.

B. **Endangered Species:**

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

C. **Anti-Degradation:**

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

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

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

A. Design Flow: Current – 2.3 MGD
Future – 3.5 MGD

B. Type of Treatment: Current – two aerated lagoons in parallel, thence into a two-cell stabilization pond, thence into a dissolved air floatation unit (DAF), followed by chlorination then dechlorination

Future – fines screen, equalization basin, activated sludge with two aeration basins, two clarifiers, sludge belt press, post aeration, and UV disinfection

The current treatment plant is being modified to an activated sludge treatment plant. See Item #4 of this Fact Sheet for additional information.

C. Discharge Description: treated municipal wastewater

D. Facility Status: This facility is classified as a major municipal since the current and future design flows of the facility listed above are 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 of the modifications to the treatment plant was granted with the issuance of State Construction Permit No. AR0021776C which was issued on 3/27/2013. See Item #4 of this Fact Sheet for additional information.

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.

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10. INDUSTRIAL WASTEWATER CONTRIBUTIONS.

INDUSTRIAL USERS

This facility receives industrial process wastewater. Based on the applicant's effluent compliance history and the type of industrial contributions, standard Pretreatment Program implementation conditions are deemed appropriate at this time.

11. SEWAGE SLUDGE PRACTICES.

Sludge is currently recirculated in the plant operation. In the future, waste sludge will be hauled off site as necessary.

12. PERMIT CONDITIONS.

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

A. Effluent Limitations

Outfall 001 - treated municipal wastewater

Limits effective for facility at design flow of 2.3 MGD.

1. Conventional and/or Toxic Pollutants

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Max.)	once/day	totalizing meter
Overflows	Monthly Total SSOs (occurrences/month)			See Condition 5 of Part II	
Overflow Volume	Monthly Total Volume of SSOs (gallons/month)			See Condition 5 of Part II	

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<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
Carbonaceous Biochemical Oxygen Demand (CBOD5)	192	10	15	three/week	composite
Total Suspended Solids (TSS)	288	15	22.5	three/week	composite
Ammonia Nitrogen (NH3-N)					
(April)	45	2.35	7.5	three/week	composite
(May – October)	38	2	3	three/week	composite
(November – March)	96	5	7.5	three/week	composite
Dissolved Oxygen (DO)					
(May – October)	N/A	5.0 (Inst. Min.)		three/week	grab
(November – April)	N/A	7.4 (Inst. Min.)		three/week	grab
Fecal Coliform Bacteria (FCB)	(Mcol/day)	(colonies/100 ml)			
(April – September)	34,800	200	400	three/week	grab
(October – March)	174,000	1000	2000	three/week	grab
Total Residual Chlorine (TRC)	N/A	<0.033 mg/l (Inst. Max.)		three/week	grab
Total Phosphorus (TP)	Report	Report	Report	three/week	grab
Nitrate + Nitrite Nitrogen (NO3+NO2-N)	Report	Report	Report	three/week	grab
Total Recoverable Cyanide	0.154	8.03 µg/l	16.12 µg/l	once/quarter	grab
Total Recoverable Selenium	0.148	7.73 µg/l	15.5 µg/l	once/quarter	composite
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	three/week	grab
Chronic WET Limits	N/A	not < 73%		once/quarter	24-hr composite

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

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B. Effluent Limitations

Outfall 001 - treated municipal wastewater

Limits effective at design flow of 3.5 MGD.

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

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Max.)	once/day	totalizing meter
Overflows	Monthly Total SSOs (occurrences/month)			See Condition 5 of Part II	
Overflow Volume	Monthly Total Volume of SSOs (gallons/month)			See Condition 5 of Part II	
Carbonaceous Biochemical Oxygen Demand (CBOD5)	292	10	15	three/week	composite
Total Suspended Solids (TSS)	438	15	22.5	three/week	composite
Ammonia Nitrogen (NH3-N)					
(April)	75	2.57	7.5	three/week	composite
(May – October)	58	2	3	three/week	composite
(November – March)	146	5	7.5	three/week	composite
Dissolved Oxygen (DO)					
(May – October)	N/A	5.0 (Inst. Min.)		three/week	grab
(November – April)	N/A	7.4 (Inst. Min.)		three/week	grab
Fecal Coliform Bacteria (FCB)	(Mcol/day)	(colonies/100 ml)			
(April – September)	34,800	200	400	three/week	grab
(October – March)	174,000	1000	2000	three/week	grab
Total Phosphorus (TP)	Report	Report	Report	three/week	grab
Nitrate + Nitrite Nitrogen (NO3+NO2-N)	Report	Report	Report	three/week	grab
Total Recoverable Cyanide	0.216	7.40 µg/l	14.85 µg/l	once/quarter	grab
Total Recoverable Selenium	0.204	6.99 µg/l	14.03 µg/l	once/quarter	composite
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	three/week	grab
Chronic WET Limits	N/A	not < 78%		once/quarter	24-hr composite

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

13. BASIS FOR PERMIT CONDITIONS.

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

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

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

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
Current Design Flow of 2.3 MGD								
CBOD5	10	15	25	40	10	15	10	15
TSS	N/A	N/A	15	22.5	15	22.5	15	22.5
NH3-N								
(April)	2.57	7.5	N/A	N/A	2.35	7.5	2.57	7.5
(May – October)	2	3	N/A	N/A	2	3	2	3
(November – March)	5	7.5	N/A	N/A	5	7.5	5	7.5
DO								
(May – October)	5.0 (Inst. Min.)		N/A		5.0 (Monthly Avg. Min.)		5.0 (Inst. Min.)	
(November – April)	7.4 (Inst. Min.)		N/A		7.4 (Monthly Avg. Min.)		7.4 (Inst. Min.)	

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 AFIN: 31-00036

Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
FCB (col/100 ml)								
(April – September)	200	400	N/A	N/A	200	400	200	400
(October – March)	1000	2000	N/A	N/A	1000	2000	1000	2000
TRC (Inst. Max)	N/A		< 0.033 mg/l		<0.1 mg/l		<0.033 mg/l	
TP	N/A	N/A	Report	Report	Report	Report	Report	Report
NO ₃ + NO ₂ - N	N/A	N/A	Report	Report	Report	Report	Report	Report
Total Rec. Cyanide	8.03 µg/l	16.12 µg/l	N/A	N/A	8.03 µg/l	16.12 µg/l	8.03 µg/l	16.12 µg/l
Total Rec. Selenium	7.73 µg/l	15.5 µg/l	N/A	N/A	7.73 µg/l	15.5 µg/l	7.73 µg/l	15.5 µg/l
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.	
Future Design Flow of 3.5 MGD								
CBOD5	10	15	25	40	N/A	N/A	10	15
TSS	N/A	N/A	15	22.5	N/A	N/A	15	22.5
NH ₃ -N								
(April)	2.57	7.5	N/A	N/A	N/A	N/A	2.57	7.5
(May – October)	2	3	N/A	N/A	N/A	N/A	2	3
(November – March)	5	7.5	N/A	N/A	N/A	N/A	5	7.5
DO								
(May – October)	5.0 (Inst. Min.)		N/A		N/A		5.0 (Inst. Min.)	
(November – April)	7.4 (Inst. Min.)		N/A		N/A		7.4 (Inst. Min.)	
FCB (col/100 ml)								
(April – September)	200	400	N/A	N/A	N/A	N/A	200	400
(October – March)	1000	2000	N/A	N/A	N/A	N/A	1000	2000
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

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Parameter	Water Quality-Based		Technology-Based/BPJ		Previous Permit		Permit Limit	
	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l	Monthly Avg. mg/l	7-day Avg. mg/l
Total Rec. Cyanide	7.40 µg/l	14.85 µg/l	N/A	N/A	N/A	N/A	7.40 µg/l	14.85 µg/l
Total Rec. Selenium	6.99 µg/l	14.03 µg/l	N/A	N/A	N/A	N/A	6.99 µg/l	14.03 µg/l
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		N/A		6.0-9.0 s.u.	
Chronic WET Limits	Not < 78%		N/A		N/A		Not < 78%	

A. Justification for Limitations and Conditions of the Draft Permit:

Parameter	Water Quality or Technology	Justification
CBOD5 ¹	Water Quality	MultiSMP Model dated August 30, 2013, 40 CFR 122.44(l), and previous permit
TSS ¹	Technology	40 CFR 122.44(l) and previous permit
NH3-N ²	Water Quality	Reg. 2.512, MultiSMP Model dated August 30, 2013, 40 CFR 122.44(l) and previous permit
DO ³	Water Quality	Reg. 2.505 40 CFR 122.44(l), and previous permit
FCB ⁴	Water Quality	Concentration : Reg. 2.507, 40 CFR 122.44(l), and previous permit Loading: <i>Pathogen TMDLs for Selected Reaches in Planning Segment 1C</i>
TRC ⁵	Technology	Reg. 2.409, 40 CFR 122.44(l), and previous permit
TP ⁶	Technology	CPP, 40 CFR 122.44(l), and previous permit
NO ₃ + NO ₂ – N ⁶	Technology	CPP, 40 CFR 122.44(l), and previous permit
Total Rec. Cyanide ⁷	Water Quality	Reg. 2.508, 40 CFR 122.44(l), and previous permit
Total Rec. Selenium ⁷	Water Quality	Reg. 2.508, 40 CFR 122.44(l), and previous permit
pH ⁸	Water Quality	Reg. 2.504, 40 CFR 122.44(l), and previous permit
Chronic WET Limits ⁹	Water Quality	Reg. 2.409

1. The CBOD5 and TSS limits at the current design flow are not changing with this permit renewal. The CBOD5 and TSS concentration limits are not changing when the activated sludge plant goes on-line. The MultiSMP model showed that the CBOD5 limits are protective of the water quality of Mine Creek. The TSS limits will continue to be 1.5 times the CBOD5 limits. The CBOD5 and the TSS mass limits will be increasing when the activated sludge plant goes on-line due to the increase in design flow.

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2. The NH₃-N limits at the current design flow are not changing with this permit renewal. The concentration limits for the months of May through March will not be changing when the activated sludge plant goes on-line based on the MultiSMP model. The monthly average concentration limit for the month of April will be increasing slightly. See Item #13.B of this Fact Sheet for additional information. The 7-day average NH₃-N concentration limit for the month of April will not be changing since the toxicity based limit and the DO model based limit are identical.
3. The previous permit included the effluent limitations for DO expressed as Monthly Average Minimum. These limits are now expressed as Instantaneous Minimum since the receiving stream 7Q10 is zero. The instantaneous minimum measurement requirement is needed to ensure that the DO water quality standard is maintained. A schedule of compliance has not been included since the DMR data demonstrates that the facility should have no problem meeting the change in measurement for the DO limit.
4. The FCB concentration limits will remain unchanged at the current design flow and will not change when the activated sludge plant goes on-line. Loading limits have been placed in the permit based on *Pathogen TMDLs for Selected Reaches in Planning Segment 1C*. The WLAs are contained in Appendix D, Table 2 of the TMDL. The WLAs have been converted from colonies per day to million colonies per day for reporting purposes.
5. The TRC limit for the current wastewater treatment plant is being revised to 0.033 mg/l based upon the most up-to-date MQL for this parameter. When the activated sludge plant goes on-line, it will include UV disinfection instead of chlorine disinfection. Therefore, the TRC requirements will be removed when the activated sludge plant goes on-line.
6. The Total Phosphorous and Nitrates plus Nitrites as Nitrogen monitoring and reporting requirements will remain in the permit based on the Nutrient Control Implementation Plan in Appendix D of the CPP, pages D-8 and D-9.
7. The permittee has also demonstrated reasonable potential for violations of the water quality standards for Total Recoverable Cyanide at the future design flow of 3.5 MGD. The limits for Total Recoverable Cyanide and Total Recoverable Selenium at the current design flow have been continued from the previous permit. See Item #13.E of this Fact Sheet for additional information.
8. The required pH range is continued from the previous permit. The pH requirements will not be changing when the activated sludge plant goes on-line.

9. See Item #15 of this Fact Sheet for information concerning the WET limits.

B. **Anti-backsliding**

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

The draft permit maintains the requirements of the previous permit with the exception of revised limitations identified for TRC and NH₃-N in the month of April. The TRC limits are being removed when the activated sludge plant goes on-line. The requirement is being removed because the permittee will be installing UV disinfection with the activated sludge. This revision does not violate the anti-backsliding regulations in 40 CFR 122.44(l) since the change is based on a substantial alteration to the facility. See 40 CFR 122.44(l)(2)(i)(A).

The mass limits for CBOD₅, TSS, NH₃-N, Total Recoverable Cyanide, and Total Recoverable Selenium are increasing since the design flow of the facility will be increasing when the activated sludge plant goes on-line. These revisions do not violate the anti-backsliding regulations in 40 CFR 122.44(l) since the changes are based on a substantial alteration to the facility. See 40 CFR 122.44(l)(2)(i)(A).

The NH₃-N concentration limit for the month of April is increasing when the activated sludge plant goes on-line. The MultiSMP model conducted during the last permit renewal used an incorrect distance between this facility and an upstream discharger which resulted in the use of an elevated NH₃-N background concentration in the toxicity calculations. Also, the background flows used in the toxicity calculations for the primary season in the previous renewal did not match the background flows used in the MultiSMP model. This revision does not violate the anti-backsliding standards in 40 CFR 122.44(l) since technical mistakes were made during the last permit renewal. See 40 CFR 122.44(l)(2)(i)(B)(2).

C. Limits Calculations

1. Mass limits:

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

The calculation of the loadings (lbs per day) uses a design flow of 2.3 MGD (for the current WWTP) and 3.5 MGD (for the future WWTP) and the following equation:

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

2. 7-Day Average Limits:

The 7-Day Average limits for NH₃-N (May through March) as well as CBOD₅ and TSS are based on Section 5.4.2 of the Technical Support Document for Water Quality-Based Toxics Control.

$$\text{7-Day Average limits} = \text{Monthly average limits} \times 1.5$$

The 7-Day Average NH₃-N limits for the month of April are based on the requirements of Reg. 2.512.

The 7-Day Average limits for FCB are based on Reg. 2.507.

The 7-Day Average limits for Total Recoverable Copper, Total Recoverable Cyanide, Total Recoverable Mercury, Total Recoverable Selenium, and Total Recoverable Zinc are based on the procedures set forth in the CPP.

3. Ammonia-Nitrogen (NH₃-N):

The water quality effluent limitations for Ammonia are based either on DO-based effluent limits or on toxicity-based standards, whichever are more stringent. The toxicity-based effluent limitations are based on Reg. 2.512.

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D. 208 Plan (Water Quality Management Plan)

The 208 Plan, developed by the ADEQ under provisions of Section 208 of the federal Clean Water Act, is a comprehensive program to work toward achieving federal water goals in Arkansas. The initial 208 Plan, adopted in 1979, provides for annual updates, but can be revised more often if necessary. The 208 Plan has been revised to change the NH₃-N limit for the month of April to 2.57 mg/l. The future design flow of 3.5 MGD will also be added to the 208 Plan.

E. Priority Pollutant Scan (PPS)

ADEQ 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), Regulation No. 2 (Reg. 2.508) and criteria obtained from the "Quality Criteria for Water, 1986 (Gold Book)".

Under Federal Regulation 40 CFR Part 122.44(d), as adopted by Regulation No. 6, if a discharge poses the reasonable potential to cause or contribute to an exceedance above a water quality standard, the permit must contain an effluent limitation for that pollutant. Effluent limitations for the toxicants listed below have been derived in a manner consistent with the Technical Support Document (TSD) for Water Quality-based Toxics Control (EPA, March 1991), the CPP, and 40 CFR Part 122.45(c).

The following items were used in calculations:

Parameter	Value	Source
Current Flow = Q	2.3 MGD = 3.55 cfs	Application
Future Flow = Q	3.5 MGD = 5.41 cfs	Application
Background Flow	2.22 cfs	U.S.G.S. and avg. flow from Tyson's Nashville Facility*
TSS	5.5 mg/l	CPP
Hardness as CaCo ₃	31 mg/l	CPP
pH	7.11 s.u.	RED0048B, 3/8/2011
Cb, Beryllium	0.05 µg/l	RED0048B**
Cb, Cadmium	0.05 µg/l	RED0048B**
Cb, Chromium (Tri)	0.21 µg/l	RED0048B**
Cb, Copper	2.33 µg/l	RED0048B**

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Parameter	Value	Source
Cb, Lead	0.1 µg/l	RED0048B**
Cb, Nickel	1.95 µg/l	RED0048B**
Cb, Selenium	0.4 µg/l	RED0048B**
Cb, Silver	0.46 µg/l	RED0048B**
Cb, Zinc	11.92 µg/l	RED0048B**

*The U.S.G.S. 7Q10 of 0.5 cfs was added to the average flow of 1.72 cfs (1.11 MGD) from Tyson's Nashville facility (NPDES Permit No. AR0041734). The use of the average flow from Tyson's facility is continued from the previous permit.

**Geometric mean of data gathered from 5/5/2006 through 2/22/2011.

The following pollutants were reported above the maximum allowable MQL or the MQL achieved during the effluent testing. These results were reported on the PPS form submitted with the renewal application or with the required annual pretreatment reports at the following web address:

http://www.adeq.state.ar.us/home/pdssql/p_permits_online_npdes_additional.asp?PmtNbr=AR0021776&Category=Pretreatment\Reports&Title=Pretreatment Reports

With the exception of Selenium and Cyanide, each of the results listed below is the geometric mean of approximately 20 data points. A total of 37 samples were used to calculate the geometric mean for Selenium and Cyanide. Additional test results were available for those two parameters since limits were included in the previous permit.

Pollutant	Concentration Reported, µg/l	Reasonable Potential, Yes/No
Total Recoverable Chromium	2.08	No
Total Recoverable Copper	4.2	No
Total Recoverable Lead	0.41	No
Total Recoverable Mercury	0.0073	No
Total Recoverable Nickel	18.37	No
Total Recoverable Selenium	2.15	No
Total Recoverable Zinc	25.21	No
Total Recoverable Phenols	20.5	No
Total Recoverable Cyanide	3.56	Yes

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ADEQ has determined from the submitted information that the discharge does pose the reasonable potential to cause or contribute to an exceedance above a water quality standard for some of the parameters listed in the above table. Total Recoverable Selenium will remain in the permit at the new design flow since the new WWTP was not designed to remove this parameter. The calculations used in the reasonable potential determination may be found at the following web addresses:

At 2.3 MGD:

http://www.adeg.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0021776_PPS%20at%202.3%20MGD%20using%20Geometric%20Mean%20Data_20140123.pdf

At 3.5 MGD:

http://www.adeg.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0021776_PPS%20at%203.5%20MGD%20using%20Geometric%20Mean%20Data_20140123.pdf

(a) Aquatic Toxicity

At design flow of 2.3 MGD

Pollutant	Concentration (C _e), µg/l	Concentration (C _e), µg/l 2.13	IWC µg/l		Water Quality Standards (WQS)	
			Acute, µg/l	Chronic, µg/l	Acute, µg/l	Chronic, µg/l
Total Recoverable Cyanide	3.56	7.58	6.38	5.48	22.36	5.2
Total Recoverable Selenium	2.15	4.58	3.92	3.42	20.0	5.0

At design flow of 3.5 MGD

Pollutant	Concentration (C _e), µg/l	Concentration (C _e), µg/l * 2.13	IWC µg/l		Water Quality Standards (WQS)	
			Acute, µg/l	Chronic, µg/l	Acute, µg/l	Chronic, µg/l
Total Recoverable Cyanide	3.56	7.58	6.68	5.95	22.36	5.2
Total Recoverable Selenium	2.15	4.58	4.08	3.68	20.0	5.0

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Instream Waste Concentrations (IWC's) have been calculated in the manner described in the CPP.

As can be seen in the table above, the calculated level for Total Recoverable Cyanide are sufficiently higher than the water quality standards. Limits for Total Recoverable Selenium are being continued from the previous permit. Therefore, the limits for those pollutants are calculated in the manner described in the CPP and are included in the permit as follows. The limits for Total Recoverable Cyanide and Total Recoverable Selenium at the current design flow are being continued from the previous permit. The calculations may be found at the following web links:

At 2.3 MGD:

http://www.adeg.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0021776_WQS%20for%20Selenium%20and%20Cyanide%20at%20Current%20Design%20Flow_20140127.pdf

At 3.5 MGD:

http://www.adeg.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0021776_WQS%20for%20Selenium%20and%20Cyanide%20at%20New%20Design%20Flow_20140127.pdf

Final Limits		
Pollutant	AML, µg/l	DML, µg/l
Current Design Flow of 2.3 MGD		
Total Recoverable Cyanide	8.03	16.12
Total Recoverable Selenium	7.73	15.5
Future Design Flow of 3.5 MGD		
Total Recoverable Cyanide	7.40	14.85
Total Recoverable Selenium	6.99	14.03

14. TOTAL RESIDUAL CHLORINE (TRC) REQUIREMENTS.

After dechlorination and prior to final disposal, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no detectable concentration of TRC as determined by any approved method established in 40 CFR Part 136 as less than 0.033 mg/l. Thus, the “no measurable TRC concentration” for chlorine becomes the permit 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. The TRC limit will be removed when the UV disinfection system goes on-line.

15. WHOLE EFFLUENT TOXICITY.

Section 101(a)(3) of the Clean Water Act states that ".....it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited....." 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, ADEQ is required under 40 CFR Part 122.44(d)(1), adopted by reference in Regulation 6, to include conditions as necessary to achieve water quality standards as established under Section 303 of the Clean Water Act.

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 CFR Part 122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

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 CFR Part 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 water body, at the appropriate instream critical dilution. Pursuant to 40 CFR 122.44(d)(1)(v), ADEQ 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 draft permit must establish both monthly average and 7-day minimum effluent limitations for lethality and sub-lethality following

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Regulations promulgated by 40 CFR 122.44(d)(1)(v). These effluent limitations for lethality and sub-lethality (7-day NOEC) are applied at Outfall 001 on the effective date of the permit. The daily average lethality and sub-lethality (7-day NOEC) and 7-day minimum lethality and sub-lethality (7-day NOEC) value shall not be less than 73% (Critical Dilution) effluent for the current design flow of 2.3 MGD and 78% effluent at the future design flow of 3.5 MGD for Outfall 001.

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 as follows:

TOXICITY TESTS	FREQUENCY
Chronic WET	Once/quarter

Requirements for measurement frequency are based on the CPP.

Since 7Q10 is less than 100 cfs (ft³/sec) and dilution ratio is less than 100:1, chronic WET testing requirements will be included in the permit.

The critical dilution of 73% and the dilution series of 31%, 41%, 55%, 73%, and 97% for the current design flow of 2.3 MGD is carried forth from the previous permit.

The following calculations for dilution used for the chronic WET testing at the design flow of 3.5 MGD are as follows:

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

$$Q_d = \text{Design flow} = 3.5 \text{ MGD} = 5.41 \text{ cfs}$$

$$\text{Background flow (7Q10 from U.S.G.S plus avg. flow from Tyson's Nashville Facility AR0041734)} = 0.5 \text{ cfs} + 1.72 \text{ cfs} = 2.22 \text{ cfs}$$

$$Q_b = \text{Background flow} = 0.67 \times 2.22 = 1.4874 \text{ cfs}$$

$$\text{CD} = (5.41) / (5.41 + 1.4874) \times 100 = 78\%$$

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 25%, 33%, 44%, 59%, and 78% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 78% 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

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State water quality standards. The WET testing frequency has been established to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 CFR Part 122.48.

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

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

Administrative Records

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

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Permit Number: AR0021776 AFIN: 31-00036 Outfall Number: 001
 Date of Review: 8/29/2013 Reviewer: M. Barnett
 Facility Name: Nashville
 Previous Dilution series: 31, 41, 55, 73, 97 Proposed Dilution Series: 31, 41, 55, 73, 97
 Previous Critical Dilution: 73 Proposed Critical Dilution: 73
Previous TRE activities: TRE Plan received 11/5/2007. Final report received 4/20/2010.

Frequency recommendation by species

Pimephales promelas (Fathead minnow): once per quarter
Ceriodaphnia dubia (water flea): once per quarter

TEST DATA SUMMARY

TEST DATE	Vertebrate		Invertebrate	
	Lethal NOEC	Sub-Lethal NOEC	Lethal NOEC	Sub-Lethal NOEC
7/6/2008	78	78	78	78
8/6/2008	78	78	78	59
10/6/2008	78	78	78	78
3/6/2009	78	78	78	78
6/6/2009	73	73	97	97
9/6/2009	97	97	97	97
10/31/2009	97	55	97	0
12/31/2009	97	73	97	31
1/31/2010			97	97
2/28/2010	97	97	97	97
5/30/2010	97	73	97	0
6/30/2010			97	0
9/30/2010	97	97	97	0
12/31/2010	97	97	97	41
1/31/2011	97	97		
3/31/2011			97	97
6/30/2011	97	97	97	97
9/30/2011	97	97	97	97
10/31/2011	97	97	97	41
11/30/2011			97	97
12/31/2011			97	97
3/31/2012	97	97	97	97
6/30/2012	97	97	97	31
9/30/2012	97	97	97	73
12/31/2012	97	97	97	0
3/31/2013	97	97	97	97
6/30/2013	97	97	97	73

Failures noted in BOLD

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	Vertebrate Sub-Lethal	Invertebrate Lethal	Invertebrate Sub-Lethal
Min NOEC Observed	73	55	78	30
TU at Min Observed	1.37	1.82	1.28	3.33
Count	23	22	26	26
Failure Count	0	1	0	11
Mean	1.092	1.159	1.070	1.715
Std. Dev.	0.117	0.202	0.092	0.980
CV	0.1	0.2	0.1	0.6
RPMF	1.1	1.1	1.1	1.4
Reasonable Potential	1.100	1.460	1.029	3.407
100/Critical dilution	1.370	1.370	1.370	1.370
Does Reasonable Potential Exist	No	Yes	No	Yes

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P. promelas lethal - Limit 73%
P. promelas sub-lethal - Limit 73%
C. dubia lethal - Limit 73%
C. dubia sub-lethal - Limit 73%

Additional requirements (including WET Limits) rationale/comments concerning permitting:

Lethal and sub-lethal WET limits are being carried forward from the previous permit cycle.

The previous permit included a compliance schedule for sub-lethal limits. The permittee recently conducted a sub-lethal TRE. The TRE plan was received by the Department November 5, 2007. The final TRE report was received April 20, 2010.

The final TRE report failed to specify a specific cause of toxicity. According to the final report, the City plans to increase the plant size to 3.5 MGD while changing the operational design of the plant to increase efficiencies. Planned improvements to the wastewater plant include UV disinfection, additional fine bubble aeration, and clarification. Additionally, the City is working on the collection system through manhole rehabilitation and line replacement. The City was working on placing into effect an ordinance for pretreatment with local limits for zinc and mercury.

Additional permit action was not necessary upon completion of the TRE since the permit already contained lethal and sub-lethal WET limits for both species.

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Permit Number: AR0021776 AFIN: 31-00036 Outfall Number: 001
 Date of Review: 8/29/2013 Reviewer: M. Barnett
 Facility Name: Nashville
 Previous Dilution series: 31, 41, 55, 73, 97 Proposed Dilution Series: 25, 33, 44, 59, 78
 Previous Critical Dilution: 73 Proposed Critical Dilution: 78
 Previous TRE activities: TRE Plan received 11/5/2007. Final report received 4/20/2010.

Frequency recommendation by species

Pimephales promelas (Fathead minnow): once per quarter
Ceriodaphnia dubia (water flea): once per quarter

TEST DATA SUMMARY

TEST DATE	Vertebrate		Invertebrate	
	Lethal NOEC	Sub-Lethal NOEC	Lethal NOEC	Sub-Lethal NOEC
7/6/2008	78		78	78
8/6/2008	78		78	59
10/6/2008	78		78	78
3/6/2009	78		78	78
6/6/2009	73		73	97
9/6/2009	97		97	97
10/31/2009	97		55	97
12/31/2009	97		73	31
1/31/2010				97
2/28/2010	97		97	97
5/30/2010	97		73	0
6/30/2010				97
9/30/2010	97		97	0
12/31/2010	97		97	41
1/31/2011	97		97	
3/31/2011				97
6/30/2011	97		97	97
9/30/2011	97		97	97
10/31/2011	97		97	41
11/30/2011				97
12/31/2011				97
3/31/2012	97		97	97
6/30/2012	97		97	31
9/30/2012	97		97	73
12/31/2012	97		97	0
3/31/2013	97		97	97
6/30/2013	97		97	73

Failures noted in **BOLD**

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	Vertebrate Sub-Lethal	Invertebrate Lethal	Invertebrate Sub-Lethal
Min NOEC Observed	73	55	78	30
TU at Min Observed	1.37	1.82	1.28	3.33
Count	23	22	26	26
Failure Count	0	1	0	11
Mean	1.092	1.159	1.070	1.715
Std. Dev.	0.117	0.202	0.092	0.980
CV	0.1	0.2	0.1	0.6
RPMF	1.1	1.1	1.1	1.4
Reasonable Potential	1.205	1.600	1.128	3.733
100/Critical dilution	1.250	1.250	1.250	1.250
Does Reasonable Potential Exist	No	Yes	No	Yes

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PERMIT ACTION

<p><i>P. promelas</i> lethal - Limit 78% <i>P. promelas</i> sub-lethal - Limit 78% <i>C. dubia</i> lethal - Limit 78% <i>C. dubia</i> sub-lethal - Limit 78%</p>
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Additional requirements (including WET Limits) rationale/comments concerning permitting:

At this time, prior to plant upgrade WET limits are being carried forward from the previous permit cycle. (see below)

All WET limits (lethal and sub-lethal) will be reevaluated upon the next permit renewal. After reevaluation, if appropriate, WET limits will be removed from the permit during the next renewal. Removal of the WET limits would be in accordance with 40 C.F.R. 122.44(l) which states “*Reissued permits.* (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under § 122.62.)”

The conversion of the treatment system from aerated lagoons to activated sludge would meet the requirement of material and substantial changes in 40 CFR 122.44(l)(2)(i)(A) and would therefore not violate the anti-backsliding provisions of 40 CFR 122.44(l)(1).

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16. SAMPLE TYPE AND FREQUENCY.

Requirements for sample type and sampling frequency have been based on the current discharge permit. The “6-hr composite” and “24-hr composite” sample types have been changed to “composite” to allow for flexibility in how the required samples are obtained.

The sample type for Selenium has been changed to composite from grab based on the change in the treatment system and 40 CFR 122.21(g)(7). Cyanide sample types will remain “grab” based on 40 CFR 122.21(g)(7).

The following table is applicable to both discharge scenarios.

Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Flow	once/day	totalizing meter	once/day	totalizing meter
CBOD5	three/week	6-hr composite	three/week	composite
TSS	three/week	6-hr composite	three/week	composite
NH3-N				
(April)	three/week	6-hr composite	three/week	composite
(May – October)	three/week	6-hr composite	three/week	composite
(November – March)	three/week	6-hr composite	three/week	composite
DO				
(May – October)	three/week	grab	three/week	grab
(November – April)	three/week	grab	three/week	grab
FCB				
(April – September)	three/week	grab	three/week	grab
(October – March)	three/week	grab	three/week	grab
TRC	three/week	grab	three/week	grab
TP	three/week	grab	three/week	grab
NO ₃ + NO ₂ - N	three/week	grab	three/week	grab
Total Rec. Cyanide	once/quarter	grab	once/quarter	grab
Total Rec. Selenium	once/quarter	grab	once/quarter	composite

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Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
pH	three/week	grab	three/week	grab

17. STORMWATER REQUIREMENTS

Coverage for stormwater runoff associated with industrial activity is under the general permit, ARR000000. See tracking number ARR000453.

18. PERMIT COMPLIANCE.

A Schedule of Compliance has been included in this permit for Total Recoverable Copper, Total Recoverable Mercury, and Total Recoverable Zinc for the existing treatment plant (design flow = 2.3 MGD).

Compliance with all permit requirements is required in accordance with the schedule provided in Part IB of the permit. The Department has chosen to exercise its discretion provided for in Reg. 2 to allow the permittee three years from the effective date of the permit to come into compliance with the new limits for the existing treatment plant. These are new water quality based limits. The permittee has demonstrated through their pretreatment data that they are unable to meet the monthly average limits at this time. The permittee is in the process of improving portions of the collection system and revising their pretreatment ordinance to include local limits for Mercury and Zinc (See Item #15 on page 24 of this Fact Sheet).

A schedule of compliance for the modified treatment plant (design flow = 3.5 MGD) has not been included in the permit. 40 CFR 122.47(a)(2) states that "The first NPDES permit issued to a new source or a new discharger shall contain a schedule of compliance only when necessary to allow a reasonable opportunity to attain compliance with requirements issued or revised after commencement of construction but less than three years before commencement of the relevant discharge."

The modifications are not expected to be completed until the end of 2014. Metals removal is achieved in the activated sludge process mainly through flocculation and settling. Precipitated metals may be removed either by independent settling or by physical trapping in the sludge floc matrix. Parameters that affect operating pH and the floc size and character will also affect metals removal.

The need for using flocculants to assist in the removal of metals can be determined prior to the completion of the construction activities. The necessary operating parameters to optimize metals removal can be studied and planned to be implemented when the activated sludge

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plant begins operation. Since any actions needed to assist in the removal of metals can be determined and ready for implementation by the completion of construction, a schedule of compliance for the Copper, Mercury, and Zinc levels for the modified treatment plant (design flow = 3.5 MGD) is not warranted and will not be included in the permit.

19. 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.

20. SOURCES.

The following sources were used to draft the permit:

- A. Application No. AR0021776 received 5/6/2013 with all additional information received by 7/3/2013.
- B. Arkansas Water Quality Management Plan (WQMP).
- C. APCEC Regulation No. 2.
- D. APCEC Regulation No. 3.
- E. APCEC Regulation No. 6 which includes Title 40 Code of Federal Regulations adapted verbatim by ADEQ in Reg. 6.104.
- F. 40 CFR Parts 122, 125, 133 and 403.
- G. Discharge permit file AR0021776.
- H. State Construction permit file AR0021776C.
- I. Discharge Monitoring Reports (DMRs).
- J. "Arkansas Water Quality Inventory Report 2008 (305(b))", ADEQ.
- K. "Identification and Classification of Perennial Streams of Arkansas", Arkansas Geological Commission.
- L. Continuing Planning Process (CPP).
- M. Technical Support Document For Water Quality-based Toxic Control.
- N. Inspection Report dated 11/9/2011.
- O. Site visit on 10/01/2013. Changes to the permit were discussed.
- P. MultiSMP Model dated 8/30/2013.
- Q. E-mail to EPA Region VI regarding review status of permit dated 4/4/2014.
- R. E-mails with EPA Region VI regarding permit review status dated 4/4/2014.
- S. E-mails with EPA Region VI regarding permit review status dated 4/9/2014.
- T. E-mails with EPA Region VI regarding permit review status dated 4/14/2014.

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21. PUBLIC NOTICE.

The public notice describes the procedures for the formulation of final determinations and shall provide for a public comment period of 30 days. During this period, any interested persons may submit written comments on the permit and may request a public hearing to clarify issues involved in the permitting decision. A request for a public hearing shall be in writing and shall state the nature of the issue(s) proposed to be raised in the hearing.

A copy of the permit and public notice will be sent via email to the Corps of Engineers, the Regional Director of the U.S. Fish and Wildlife Service, the Department of Arkansas Heritage, the EPA, and the Arkansas Department of Health.

22. POINT OF CONTACT.

For additional information, contact:

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

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Permit Number: AR0021776

AFIN: 31-00036

**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 of Nashville

is authorized to discharge treated municipal wastewater from a facility located as follows: 743 Highway 27 South, Nashville, AR 71852, on the south side of the highway near junction of Highway 27B in Howard County, Arkansas. The applicant's mailing address is: 426 North Main Street, Nashville, AR 71852.

Facility Coordinates: Latitude: 33° 55' 11.26"; Longitude: 93° 51' 40.16"

Receiving stream: through an 18" pipe to Mine Creek thence to Millwood Lake, thence to the Red River in Segment 1C of the Red River Basin.

The permitted outfall is located at the following coordinates:

Outfall 001: Latitude: 33° 54' 56"; Longitude: 93° 51' 28"

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

Effective Date:

Expiration Date:

Ellen Carpenter
Chief, Water Division
Arkansas Department of Environmental Quality

Issue Date

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PART I PERMIT REQUIREMENTS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated municipal wastewater for WWTP at design flow of 2.3 MGD.

During the period beginning on 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 and calculations.

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Max.)	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 (CBOD5)	192	10	15	three/week	composite
Total Suspended Solids (TSS)	288	15	22.5	three/week	composite
Ammonia Nitrogen (NH3-N)					
(April)	45	2.35	7.5	three/week	composite
(May – October)	38	2	3	three/week	composite
(November – March)	96	5	7.5	three/week	composite
Dissolved Oxygen (DO)					
(May – October)	N/A	5.0, (Inst. Min.)		three/week	grab
(November – April)	N/A	7.4, (Inst. Min.)		three/week	grab
Fecal Coliform Bacteria (FCB)	(Mcol/day) ⁷	(colonies/100ml)			
(April – September)	34,800	200	400	three/week	grab
(October – March)	174,000	1000	2000	three/week	grab
Total Residual Chlorine (TRC) ²	N/A	<0.033 mg/l (Inst. Max.)		three/week	grab
Total Phosphorus (TP)	Report	Report	Report	three/week	grab
Nitrate + Nitrite Nitrogen (NO3 + NO2-N)	Report	Report	Report	three/week	grab
Total Recoverable Cyanide ⁶	0.154	8.03 µg/l	16.12 µg/l	once/quarter	grab
Total Recoverable Selenium ⁶	0.148	7.73 µg/l	15.5 µg/l	once/quarter	composite
pH	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	three/week	grab

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<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
<u>Whole Effluent Toxicity</u> ^{3,4,5} (7-day NOEC) ^{1,2} 22414	<u>Daily Avg.</u> <u>Min.</u> Not < 73%	<u>7-day Avg. Min.</u> Not < 73%		once/quarter	24-hr composite
<u>Pimephales promelas (Chronic)</u> ³ Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/quarter	24-hr composite 24-hr composite 24-hr composite 24-hr composite 24-hr composite
<u>Ceriodaphnia dubia (Chronic)</u> ³ Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail production (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/quarter	24-hr composite 24-hr composite 24-hr composite 24-hr composite 24-hr composite

- 1 See Condition No. 5 of Part II (SSO Condition). If there are no overflows during the entire month, report "zero" (0).
- 2 See Condition No. 9 of Part II. (TRC Condition).
- 3 See Condition No. 10 of Part II (WET Testing Condition).
- 4 The NOEC (No Observed Effect Concentration) is 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.
- 5 Whole Effluent Toxicity limits for lethal and sub-lethal endpoints for both species.
- 6 See Condition No. 8 of Part II (Metals Testing Condition).
- 7 See Condition No. 12 of Part II (Formula for calculating Mcol/day).

There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom deposits, or sludge banks. There shall be no visible sheen as defined in Part IV of this permit. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after the dechlorination unit and prior to entering the receiving stream.

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PART I PERMIT REQUIREMENTS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated municipal wastewater for WWTP with a design flow of 3.5 MGD.

During the period beginning on 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 and calculations.

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Monthly Avg.	7-Day Avg.		
Flow	N/A	Report, MGD	Report, MGD (Daily Max.)	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)	292	10	15	three/week	composite
Total Suspended Solids (TSS)	438	15	22.5	three/week	composite
Ammonia Nitrogen (NH ₃ -N)					
(April)	75	2.57	7.5	three/week	composite
(May – October)	58	2	3	three/week	composite
(November – March)	146	5	7.5	three/week	composite
Dissolved Oxygen (DO)					
(May – October)	N/A	5.0, (Inst. Min.)		three/week	grab
(November – April)	N/A	7.4, (Inst. Min.)		three/week	grab
Fecal Coliform Bacteria (FCB)	(Mcol/day) ⁶	(colonies/100ml)			
(April – September)	34,800	200	400	three/week	grab
(October – March)	174,000	1000	2000	three/week	grab
Total Phosphorus (TP)	Report	Report	Report	three/week	grab
Nitrate + Nitrite Nitrogen (NO ₃ + NO ₂ -N)	Report	Report	Report	three/week	grab
Total Recoverable Cyanide ⁵	0.216	7.40 µg/l	14.85 µg/l	once/quarter	grab
Total Recoverable Selenium ⁵	0.204	6.99 µg/l	14.03 µg/l	once/quarter	composite
pH	N/A	<u>Minimum</u> 6.0 s.u.	<u>Maximum</u> 9.0 s.u.	three/week	grab

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<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>	
	Mass (lbs/day, unless otherwise specified)	Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
		Monthly Avg.	Monthly Avg.		
<u>Whole Effluent Toxicity</u> ^{2,3,4} (7-day NOEC) ^{1,2} 22414	<u>Daily Avg.</u> <u>Min.</u> Not < 78%	<u>7-day Avg. Min.</u> Not < 78%		once/quarter	24-hr composite
<u>Pimephales promelas (Chronic)</u> ² Pass/Fail Lethality (7-day NOEC) TLP6C Pass/Fail Growth (7-day NOEC) TGP6C Survival (7-day NOEC) TOP6C Coefficient of Variation (Growth) TQP6C Growth (7-day NOEC) TPP6C		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/quarter	24-hr composite 24-hr composite 24-hr composite 24-hr composite 24-hr composite
<u>Ceriodaphnia dubia (Chronic)</u> ² Pass/Fail Lethality (7-day NOEC) TLP3B Pass/Fail production (7-day NOEC) TGP3B Survival (7-day NOEC) TOP3B Coefficient of Variation (Reproduction) TQP3B Reproduction (7-day NOEC) TPP3B		<u>7-Day Average</u> Report (Pass=0/Fail=1) Report (Pass=0/Fail=1) Report % Report % Report %		once/quarter once/quarter once/quarter once/quarter once/quarter	24-hr composite 24-hr composite 24-hr composite 24-hr composite 24-hr composite

- 1 See Condition No. 5 of Part II (SSO Condition). If there are no overflows during the entire month, report "zero" (0).
- 2 See Condition No. 10 of Part II (WET Testing Condition).
- 3 The NOEC (No Observed Effect Concentration) is 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.
- 4 Whole Effluent Toxicity limits for lethal and sub-lethal endpoints for both species.
- 5 See Condition No. 8 of Part II (Metals Testing Condition).
- 6 See Condition No. 12 of Part II (Formula for calculating Mcol/day).

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

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

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SECTION B. PERMIT COMPLIANCE

1. Compliance is required on the effective date of the permit.
2. Pretreatment Performance Summary is due during the month of February each year of the permit.
3. 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 (TBLL) are based on current state water quality standards and are adequate to prevent pass through of pollutants, inhibition of or interference with the treatment facility, worker health and safety problems, and sludge contamination,
 - (2) a WRITTEN NOTIFICATION that a technical evaluation revising the current TBLL will be submitted within 12 months of the effective date of this permit, or
 - (3) a written certification that local limits are not necessary for any pollutant at this time.

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PART II OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall be licensed as Class III by the State of Arkansas in accordance with APCEC Regulation No. 3.
2. For publicly owned treatment works, the 30-day average percent removal for Carbonaceous Biochemical Oxygen Demand (CBOD5) and Total Suspended Solids shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR Part 133.102, as adopted by reference in APCEC Regulation No. 6. The permittee must monitor the influent and effluent CBOD5 and TSS at least once per year and calculate the percent removal to ensure compliance with the required 85 percent removal. This information must be maintained on site and provided to Department personnel upon request.
3. In accordance with 40 CFR Parts 122.62 (a)(2) and 124.5, this permit may be reopened for modification or revocation and/or reissuance to require additional monitoring and/or effluent limitations when new information is received that actual or potential exceedance of State water quality criteria and/or narrative criteria are determined to be the result of the permittee's discharge(s) to a relevant water body or a Total Maximum Daily Load (TMDL) is established or revised for the water body that was not available at the time of the permit issuance that would have justified the application of different permit conditions at the time of permit issuance.
4. Other Specified Monitoring Requirements

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

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

Upon written approval of the alternative monitoring method and/or analytical instruments, these methods or instruments must be consistently utilized throughout the monitoring period.

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ADEQ must be notified in writing and the permittee must receive written approval from ADEQ if the permittee decides to return to the original permit monitoring requirements.

5. Sanitary Sewer Overflow (SSO) Reporting Requirements:

All SSOs are prohibited.

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

B. Immediate Reporting

Overflows that endanger health or the environment shall be orally reported to the Enforcement Branch of the Water Division by telephone (501-682-0638) or by email waterenfssso@adeq.state.ar.us within 24 hours from the time the permittee becomes aware of the circumstance.

C. Follow-Up Written Reports/email:

A written report of overflows that endanger health or the environment shall be provided to ADEQ within 5 days of the time the permittee becomes aware of the circumstance.

At a minimum, the report shall identify:

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

A 24-hr and 5-day follow-up written report can be filled-in or downloaded from the ADEQ /Water Division/Enforcement Branch Web page at

http://www.adeq.state.ar.us/water/branch_enforcement/forms/sso_report.asp

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D. 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.6, 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, the General Pretreatment Regulations (40 CFR Part 403) and the approved POTW pretreatment program submitted by the permittee. The pretreatment program was approved on 4/12/93. The Permittee submitted Program modifications to be current with the Streamlining revisions to 40 CFR 403 on 2/15/12 and 5/16/13 and are pending final review and approval. The POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

- (1) Industrial user information shall be updated at a frequency adequate to ensure that all IUs are properly characterized at all times;
- (2) The frequency and nature of industrial user compliance monitoring activities by the permittee shall be commensurate with the character, consistency and volume of waste. The permittee must inspect and sample the effluent from each Significant Industrial User in accordance with 40 CFR 403.8(f)(2)(v). This is in addition to any industrial self-monitoring activities;
- (3) The permittee shall enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements;
- (4) The permittee shall control through permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under 40 CFR 403.3 (v), this control shall be achieved through individual control mechanisms, in accordance with 40 CFR 403.8(f)(1)(iii). Control

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mechanisms must be enforceable and contain, at a minimum, the following conditions:

- (a) Statement of duration (in no case more than five years);
 - (b) Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;
 - (c) Effluent limits, including Best Management Practices, based on applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
 - (d) Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored sampling location, sampling frequency, and sample type, based on the applicable general Pretreatment Standards in 40 CFR 403, categorical Pretreatment Standards, local limits, and State and local law;
 - (e) Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond federal deadlines; and
 - (f) Requirements to control slug discharges, if determined by the POTW to be necessary.
- (5) The permittee shall evaluate, whether each Significant Industrial User needs a plan or other action to control slug discharges, in accordance with 40 CFR 403.8(f)(2)(vi);
 - (6) The permittee shall provide adequate staff, equipment, and support capabilities to carry out all elements of the pretreatment program; and
 - (7) The approved program shall not be modified by the permittee without the prior approval of ADEQ.
- b. The permittee shall establish and enforce specific limits to implement the provisions of 40 CFR Parts 403.5(a) and (b), as required by 40 CFR Part 403.5(c). POTWs may develop Best Management Practices (BMPs) to implement paragraphs 40 CFR 403.5 (c)(1) and (c)(2). Such BMPs shall be considered local limits and Pretreatment Standards. Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits.

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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 (TBLL) are based on current state water quality standards and are adequate to prevent pass through of pollutants, inhibition of or interference with the treatment facility, worker health and safety problems, and sludge contamination, (2) a **WRITTEN NOTIFICATION** that a technical evaluation revising the current TBLL will be submitted within 12 months of the effective date of this permit, OR (3) a **WRITTEN NOTIFICATION** that local limits are not necessary for any pollutant at this time.

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

- c. The permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in 40 CFR 122 Appendix D (NPDES Application Testing Requirements) Table II at least once/year and the toxic pollutants in Table III at least 4 times/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, 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 4 times/year (quarterly) on both the influent and the effluent.

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

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

In addition, by 4:30 pm (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 ADEQ containing the following information:

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1. An updated list of all significant industrial users. The list must also identify:
 - (a) Industrial Users subject to the following categorical Pretreatment Standards [Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) (40 CFR Part 414), Petroleum Refining (40 CFR Part 419), and Pesticide Chemicals (40 CFR Part 455)] and for which the Control Authority has chosen to use the concentration-based standards rather than converting them to flow-based mass standards as allowed at 40 CFR 403.6(c)(6).
 - (b) Categorical Industrial Users subject to concentration-based standards for which the Control Authority has chosen to convert the concentration-based standards to equivalent mass limits, as allowed at 40 CFR 403.6(c)(5).
 - (c) Best Management Practices or Pollution Prevention alternatives required by a categorical Pretreatment Standard or as a local limit requirement that are implemented and documentation to demonstrate compliance, as required at 40 CFR 403 (b), (e) and (h).
2. For each industrial user listed the following information shall be included:
 - (a) Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) code and categorical determination;
 - (b) Control document status. Whether the user has an effective control document, and the date such document was last issued, reissued, or modified, (indicate which industrial users were added to the system (or newly identified) within the previous 12 months);
 - (c) A summary of all monitoring activities performed within the previous 12 months. The following information shall be reported:
 - total number of inspections performed;
 - total number of sampling visits made;
 - (d) Status of compliance with both effluent limitations and reporting requirements. Compliance status shall be defined as follows:
 - Compliant (C) - no violations during the previous 12 month period;
 - Non-compliant (NC) - one or more violations during the previous 12 months but does not meet the criteria for significantly noncompliant industrial users;

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- Significant Noncompliance (SNC) - in accordance with requirements described in 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;
- (1) 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;
 - (2) 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;
 - (3) The results of all influent and effluent analyses performed pursuant to paragraph c. above;
 - (4) 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.
 - (5) The information requested may be submitted in tabular form as per the example tables provided for your convenience (See Attachment A, B and C); and
 - (6) A copy of the newspaper publication of the significantly noncompliant industrial users giving the name of the newspaper and the date published;
- e. The permittee shall provide adequate notice of the following:
- (1) Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act if it were directly discharging those pollutants; and
 - (2) Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

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

Pollutant	MQL (µg/l)
Total Recoverable Cyanide	10
Total Recoverable Selenium	5

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

$$\text{MQL} = 3.3 \times \text{MDL}$$

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. After dechlorination and prior to final disposal, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no detectable concentration of TRC as determined by any approved method established in 40 CFR Part 136 as less than 0.033 mg/l. Thus, the “no measurable TRC concentration” for chlorine becomes the permit 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.

This condition only applies until the UV disinfection system is on-line.

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10. WHOLE EFFLUENT TOXICITY LIMITS (7-DAY CHRONIC NOEC FRESHWATER)

1. SCOPE AND METHODOLOGY

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

APPLICABLE TO FINAL OUTFALL:	001
REPORTED ON DMR AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	2.3 MGD design flow – 73% 3.5 MGD design flow – 78%
EFFLUENT DILUTION SERIES (%):	2.3 MGD design flow 31%, 41%, 55%, 73%, & 97% 3.5 MGD design flow 25%, 33%, 44%, 59%, & 78%
LETHAL LIMIT:	2.3 MGD design flow – 73% 3.5 MGD design flow – 78%
SUB-LETHAL LIMIT:	2.3 MGD design flow – 73% 3.5 MGD design flow – 78%
TESTING FREQUENCY:	once/quarter
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

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

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

- b. The NOEC (No Observed Effect Concentration) is herein defined as the greatest effluent dilution at and below which toxicity (lethal or sub-lethal) that is statistically

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different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.

- c. The conditions of this item are effective beginning with the effective date of the WET limit. When the testing frequency stated above is less than monthly and the effluent fails the lethal or sub-lethal endpoint at or below the required limit specified in Item 1.a., 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. During the period the permittee is out of compliance, test results shall be reported on the DMR for that reporting period. The purpose of additional tests (also referred to as 'retests' or confirmation tests) is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation. Such testing cannot confirm or disprove a previous test result.
- d. This permit may be reopened to require chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

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

- i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- ii. The mean number of Ceriodaphnia dubia neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- iii. 60% of the surviving control females must produce three broods.
- iv. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.

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- v. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the Ceriodaphnia dubia reproduction test, the growth and survival of the Fathead minnow test.
 - vi. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or sub-lethal effects are exhibited for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints in the Fathead minnow test.
 - vii. 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.
 - viii. 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%.
 - ix. A Percent Minimum Significant Difference (PMSD) range of 13 - 47 for Ceriodaphnia dubia reproduction;
 - x. A PMSD range of 12 - 30 for Fathead minnow growth.
- b. Statistical Interpretation
- i. For the Ceriodaphnia dubia survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA-821-R-02-013 or the most recent update thereof.
 - ii. For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-013, or the most recent update thereof.
 - iii. If the conditions of Test Acceptability are met in Item 2.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to

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be a passing test, and the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

- i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water where the receiving stream is classified as intermittent or where the receiving stream has no flow due to zero flow conditions.
- ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 2.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - (A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 2.a was run concurrently with the receiving water control;
 - (B) the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);
 - (C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 3.a below; and
 - (D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

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

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samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on a regular or intermittent basis.

- iii. The permittee must collect 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.
- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section
- v. MULTIPLE OUTFALLS: If the provisions of this section are applicable to multiple outfalls, the permittee shall combine the composite effluent samples in proportion to the average flow from the outfalls listed in Item 1.a above for the day the sample was collected. The permittee shall perform the toxicity test on the flow-weighted composite of the outfall samples.
- vi. 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.

3. REPORTING

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

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- b. The permittee shall report the Whole Effluent Toxicity values for the 30-Day Average Minimum and the 7-Day Minimum under Parameter No. 22414 on the DMR for that reporting period in accordance with PART III.D.4 of this permit.

If more than one valid test for a species was performed during the reporting period, the test NOECs will be averaged arithmetically and reported as the DAILY AVERAGE MINIMUM NOEC for that reporting period.

If more than one species is tested during the reporting period (in accordance with item 1.a.), the permittee shall report the lowest 30-Day Average Minimum NOEC and the lowest 7-Day Minimum NOEC for Whole Effluent Toxicity.

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

- c. The permittee shall submit the results of the valid toxicity test on the DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.
 - i. Pimephales promelas (Fathead minnow)
 - A. If the No Observed Effect Concentration (NOEC) for survival is less than or equal to the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TLP6C
 - B. Report the NOEC value for survival, Parameter No. TOP6C
 - C. Report the NOEC value for growth, Parameter No. TPP6C
 - D. If the NOEC for growth is less than or equal to the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP6C
 - E. Report the highest (critical dilution or control) Coefficient of Variation for growth, Parameter No. TQP6C

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ii. Ceriodaphnia dubia

- A. If the NOEC for survival is less than or equal to the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TLP3B
- B. Report the NOEC value for survival, Parameter No. TOP3B
- C. Report the NOEC value for reproduction, Parameter No. TPP3B
- D. If the NOEC for reproduction is less than or equal to the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP3B
- E. Report the higher (critical dilution or control) Coefficient of Variation for reproduction, Parameter No. TQP3B

11. Transition Period

The City of Nashville is converting the treatment plant from aerated lagoons and stabilization ponds with a DAF unit and chlorination/dechlorination to an activated sludge plant with UV disinfection. This will result in the design flow increasing from 2.3 MGD to 3.5 MGD.

- 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., 2.3 MGD and 3.5 MGD) on a monthly basis. The DMR for the 3.5 MGD design flow can be marked and submitted as "No Discharge", until such time as the new treatment plant is operational. The permittee must continue to submit two (2) monthly DMRs until the report required in Part II.11.b below is received.
- b. The permittee must notify the ADEQ in writing within 30 days of when the activated sludge plant is on-line.

12. The colonies/day value is to be calculated by the permittee from the measured concentrations, reported flow values, and the following formula. Separate values must be calculated to determine the monthly average and the daily maximum colonies per day. The colonies per day must then be divided by 1,000,000 to obtain million colonies per day.

$$\text{Col/day} = \text{Conc. (col/100 ml)} * \text{Flow (MGD)} * \text{conversion factor (37,854,120 (100-ml/mg))}$$

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PART III STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

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

2. Penalties for Violations of Permit Conditions

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

3. Permit Actions

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

- A. Violation of any terms or conditions of this permit; or
- B. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- C. A change in any conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- D. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.
- E. Failure of the permittee to comply with the provisions of APCEC Regulation No. 9 (Permit fees) as required by Part III.A.11 herein.

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

4. Toxic Pollutants

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

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

5. Civil and Criminal Liability

Except as provided in permit conditions 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 statutes 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.

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8. Property Rights

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

9. Severability

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

10. Applicable Federal, State or Local Requirements

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

11. Permit Fees

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

SECTION B – OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

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

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

2. Need to Halt or Reduce not a Defense

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

3. Duty to Mitigate

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

4. Bypass of Treatment Facilities

A. Bypass not exceeding limitation

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

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- (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal or preventive maintenance; and
 - (c) The permittee submitted notices as required by Part III.B.4.b.
2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Part III.B.4.c.(1).

5. Upset Conditions

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

6. Removed Substances

- A. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State. The Permittee must comply with all applicable state and Federal regulations governing the disposal of sludge, including but not limited to 40 CFR Part 503, 40 CFR Part 257, and 40 CFR Part 258.
- B. Any changes to the permittee's disposal practices described in Part II of the permit will require at least 180 days prior notice to the Director to allow time for additional

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

Calculated Flow Measurement

For calculated flow measurements that are performed in accordance with either the permit requirements or a Department approved method (i.e., as allowed under Part II.3), the +/- 10% accuracy requirement described above is waived. This waiver is only applicable when the method used for calculation of the flow has been reviewed and approved by the Department.

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3. Monitoring Procedures

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

4. Penalties for Tampering

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

5. Reporting of Monitoring Results

Monitoring results must be reported on a Discharge Monitoring Report (DMR) form provided by the Department or other form/method approved in writing by the Department (e.g., electronic submittal of DMR once approved). Monitoring results obtained during the previous monitoring period shall be summarized and reported on a DMR form postmarked no later than the 25th day of the month or submitted electronically by 6:00 p.m. of the 25th (after NETDMR is approved), following the completed reporting period beginning on the effective date of the permit. When mailing the DMRs, duplicate copies of the forms signed and certified as required by Part III.D.11 and all other reports required by Part III.D, shall be submitted to the Director at the following address:

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

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

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6. Additional Monitoring by the Permittee

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

7. Retention of Records

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

8. Record Contents

Records and monitoring information shall include:

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

9. Inspection and Entry

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

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

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SECTION D – REPORTING REQUIREMENTS

1. Planned Changes

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

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

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.

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6. Twenty-four Hour Report

- A. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain the following information:
1. A description of the noncompliance and its cause;
 2. The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 3. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- B. The following shall be included as information which must be reported within 24 hours:
1. Any unanticipated bypass which exceeds any effluent limitation in the permit;
 2. Any upset which exceeds any effluent limitation in the permit and
 3. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part I of the permit to be reported within 24 hours to the Enforcement Section of the Water Division of the ADEQ.
- C. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours to the Enforcement Section of the Water Division of the ADEQ.

7. Other Noncompliance

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

8. Changes in Discharge of Toxic Substances for Industrial Dischargers

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

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

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

9. Duty to Provide Information

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

10. Duty to Reapply

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

11. Signatory Requirements

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

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

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
 - (b) The manager of one or more manufacturing, production, or operation facilities, provided: the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and

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accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship: by a general partner or proprietor, respectively; or
3. For a municipality, State, Federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - (a) The chief executive officer of the agency, or
 - (b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

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

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

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

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

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12. Availability of Reports

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

13. Penalties for Falsification of Reports

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

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PART IV DEFINITIONS

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

1. **“Act”** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
2. **“Administrator”** means the Administrator of the U.S. Environmental Protection Agency.
3. **“APCEC”** means the Arkansas Pollution Control and Ecology Commission.
4. **“Applicable effluent standards and limitations”** means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
5. **“Applicable water quality standards”** means all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under (APCEC) Regulation No. 2, as amended.
6. **“Best Management Practices (BMPs)”** are activities, practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the State. BMPs also include treatment technologies, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw sewage. BMPs may include structural devices or nonstructural practices.
7. **“Bypass”** As defined at 122.41(m).
8. **“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.
9. **“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.
10. **“Daily Maximum”** discharge limitation means the highest allowable “daily discharge” during the calendar month. The 7-day average for Fecal Coliform Bacteria (FCB) or E-Coli is the geometric mean of the values of all effluent samples collected during the calendar week in colonies per 100 ml.

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11. **“Department”** means the Arkansas Department of Environmental Quality (ADEQ).
12. **“Director”** means the Director of the Arkansas Department of Environmental Quality.
13. **“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.
14. **“E-Coli”** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For E-Coli, report the monthly average as a 30-day geometric mean in colonies per 100 ml.
15. **“Fecal Coliform Bacteria (FCB)”**a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For Fecal Coliform Bacteria (FCB) report the monthly average as a 30-day geometric mean in colonies per 100 ml.
16. **“Grab sample”** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
17. **“Industrial User”** means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
18. **“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.
19. **“Instantaneous Minimum”** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
20. **“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.
21. **“National Pollutant Discharge Elimination System”** means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements under Sections 307, 402, 318, and 405 of the Clean Water Act.
22. **“POTW”** means a Publicly Owned Treatment Works.
23. **“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.
24. **“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.
25. **“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”

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measured during a calendar week divided by the number of “daily discharges” measured during that week.

26. **“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.
27. **“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 carelessness of improper operations.
28. **“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.
29. **“MGD”** shall mean million gallons per day.
30. **“mg/l”** shall mean milligrams per liter or parts per million (ppm).
31. **“µg/l”** shall mean micrograms per liter or parts per billion (ppb).
32. **“cfs”** shall mean cubic feet per second.
33. **“ppm”** shall mean parts per million.
34. **“s.u.”** shall mean standard units.
35. **“Weekday”** means Monday – Friday.
36. **Monitoring and Reporting:**
37. 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.

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C. QUARTERLY:

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

D. SEMI-ANNUAL:

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

E. ANNUAL or YEARLY:

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