ADEQ

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

FEB 11 2015

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (91 7199 9991 7030 4910 1171)

Beth Holland
BASF Corporation
100 Bridgeport Road
West Memphis, AR 72301

RE: Discharge Permit Number AR0037770, AFIN 18-00081

Dear Ms. Holland:

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 6 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 AR0037770, AFIN 18-00081

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 AR0037770 for which an application was received on 7/15/2013 with all additional information received by 12/1/2014 for the following applicant under the National Pollutant Discharge Elimination System (NPDES) and the Arkansas Water and Air Pollution Control Act.

Applicant: BASF Corporation, 100 Bridgeport Road, West Memphis, AR 72301-6413. Location: take I-55 South from I-40, take Exit 1, turn left (south) onto Bridgeport Road, and drive straight to the facility; Latitude: 35° 06' 00.00"; Longitude: 90° 05' 55.00" in Crittenden County, Arkansas. The discharge of treated sanitary wastewater, process wastewater, cooling tower blowdown, boiler blowdown, and contaminated stormwater is into the Mississippi River in Segment 6C of the Mississippi 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 clarify that the water quality based limits are as follows:

Year-round: BOD5/DO = > 120/2.0 mg/l

ADEQ's contact person for submitting written comments on the draft permit or the proposed changes to the 208 Plan, requesting information regarding the draft permit or the 208 Plan, or obtaining a copy of the permit and theFact 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 for the draft permit and the 208 Plan 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.

DRAFT

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 AR0037770 with Arkansas Department of Environmental Quality (ADEQ) Facility Identification Number (AFIN) 18-00081 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 and physical location is:

   BASF Corporation
   100 Bridgeport Road
   West Memphis, AR 72301

3. **PREPARED BY.**

   The permit was prepared by:

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

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

4. **PERMIT ACTIVITY.**

Previous Permit Effective Date:	2/1/2009
Previous Permit Minor Modification Dates:	6/4/2009, 4/23/2010
Previous Permit Expiration Date:	1/31/2014

   The permittee submitted a permit renewal application on 7/15/2013 with all additional information received by 12/1/2014. 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).

The permittee requested four changes (Requests 1 – 4) to their NPDES permit when they submitted the NPDES permit renewal application. Request 5 is based on a letter from EPA Region VI. The requests and the Department's responses are as follows:

Request 1: Currently, the limiting factor for discharge through Outfall 001 is the wastewater treatment plant's ultrafiltration system. The permittee is requesting permission to bypass the bioreactors and ultrafiltration units for low/non-contaminated wastewaters, i.e., stormwater runoff associated with industrial activity and boiler blowdown. These waters would be discharged directly to the weir. The permittee is also requesting permission to route low/non-contaminated wastewaters to the stormwater pond.

Response: The current permit allows the facility to route cooling tower blowdown directly to the weir associated with Outfall 001. Stormwater with low levels of contaminants and boiler blowdown are routed through the process wastewater treatment system associated with Outfall 001. Based on the facility's request and conversations between the permit writer and the permittee, it is the Department's understanding that the permittee is asking to be allowed to route the cooling tower blowdown, boiler blowdown, and stormwater with low levels of contaminants directly to the weir associated with Outfall 001 or to the stormwater pond (which will now be associated with Outfall 002).

Boiler blowdown has effluent characteristics similar to those for cooling tower blowdown. The permit currently allows cooling tower blowdown to bypass the treatment units associated with Outfall 001. The cooling tower blowdown is commingled with the other wastewaters prior to discharge at the weir. No WET test failures were reported during the term of the previous permit. No violations for BOD5 and TSS were reported during the past three years. This indicates that allowing the cooling tower blowdown to bypass the treatment units is not harming the receiving stream.

Testing which occurred prior to issuance of the previous renewal permit demonstrated that the levels of BOD5 and TSS in the cooling tower blowdown were not detectable. Boiler blowdown is expected to have the same effluent quality as cooling tower blowdown. The stormwater with low levels of contaminants will only be discharged directly to the weir associated with Outfall 001 or the pond associated with Outfall 002 in the event of a heavy rain event. For the purposes of this permit only, stormwater with low levels of contaminants is defined as the following:

- Stormwater exceeding 0.5 inches in a 24-hour period;
- No contaminates present in the sump area; and
- Does not include the first 2500 gallons of stormwater removed from the sump area.

The permittee will be required to develop Standard Operationg Procedures (SOP) and a checklist to be followed when routing stormwater with low levels of contaminants to the weir associated with Outfall 001 or the pond associated with Outfall 002. Conditions concerning

the requirements for the SOP and checklist are in Part IB of the permit as well as Condition Nos. 11 – 13 of Part II of the permit.

The Department recognizes that cooling tower blowdown, stormwater with a low level of contaminates, and boiler blowdown are often classified as dilution streams since the inclusion of these wastewaters will lower the concentrations of pollutants in the effluent stream. However, this is not cause for concern in this permit since the permittee is only required to comply with mass limits for BOD5, TSS, and all other ELG based limits. The permittee is only required to monitor and report the concentrations of BOD5, TSS, and other permitted parameters at Outfall 001.

The BOD5 mass limits and the TSS mass limits have not been changed to account for levels of those parameters in the stormwater discharged directly to the weir. Therefore, the loading levels, i.e., the pounds of a pollutant discharged per day, will not change significantly with the continued inclusion of these streams at Outfall 001 and the Department will therefore allow the cooling tower blowdown and boiler blowdown to not be routed through the treatment units associated with Outfall 001. The stormwater with low levels of contaminants will not be required to be treated in the system associated with Outfall 001 provided that it meets the requirements of Part II, Condition Nos. 11 – 13 of the permit.

In order to allow boiler blowdown, cooling tower blowdown, and stormwater with low levels of contaminants to be routed to the stormwater pond, the Department must include the outfall from that pond in Part IA of the permit. Limits will be included in the permit for this outfall which will be designated as Outfall 002 in the permit. See Item #12.A of this Fact Sheet for additional information.

It is important to note that with the exception of the cooling tower blowdown, boiler blowdown, and stormwater with low levels of contaminants, all process wastewater must be routed through the process wasteater treatment system associated with Outfall 001. The sanitary wastewater must be treated in the activated sludge package plant and discharged through Outfall 001. The permittee must continue to meet all permit limits at Outfall 001 as well as comply with all requirements for Outfall 002 on the effective date of the permit.

The well water (i.e., groundwater) used in the cooling system and other facility operations is filtered prior to use. The filters are periodically backwashed to allow for proper operation. The backwash water from the filters is sent to the pond associated with Outfall 002 and is described in the permit as "treated groundwater well filter backwash."

Request 2: Two new processes are to be introduced to the site in 2014. A chemical of concern for the WWTP is toluene. This is a new chemical for this facility. The effects of the new processes are unknown at this time and the site would like to request an interim limit or other options for toluene until data is available.

Response: The toluene limit, which is a technology based limit continued from the previous permit, is based on 40 CFR Part 414, Subpart I – Organic Chemicals, Plastics, and Synthetic Fibers, Direct Discharge Point Sources that Use End-of-Pipe Biological Treatment.

A schedule of compliance under Reg. 2.104 cannot be granted since that regulation is applicable only to water quality based limits. 40 CFR 122.47 allows for a schedule of compliance for technology based limits for new or recommencing dischargers under specific circumstances. However, that regulation does not allow a schedule of compliance for existing dischargers. Therefore, the Department cannot grant the permittee's request for a schedule of compliance for toluene.

Request 3: The permittee requested that the monitoring frequencies for BOD5, TSS, DO, FCB, and pH be reduced since the site has not had excursions in the last five years.

Response: Each parameter was evaluated using EPA's "Interim Guidance for Performance-Based Reduction of NPDES Permit Monitoring Frequencies" (hereinafter "EPA Memo"). The decision making process for reducing monitoring frequency may be summed up with the following steps:

- Review of the facility's enforcement history. Any criminal convictions under an environmental statute and NPDES civil judicial and administrative enforcement actions are considered.
- Parameter by parameter compliance history. If there has been a violation of a permit limit within the past two years, the facility cannot receive a frequency reduction for that parameter.
- Parameter by parameter performance history. The long term average for each parameter is calculated, compared with the existing permit limit, and then compared to a table in the EPA Memo to determine the potential reduction. Five years of data was reviewed for each parameter based upon the decrease in production over the last five years. Since the DO requirement is expressed as a monthly average minimum versus a limit, the DO evaluation was based on the judgment of the permit writer.

The Department has also taken into consideration the planned changes for this facility, i.e., increased production, new products, etc. The Department recognizes that the levels of BOD5 and TSS may increase and that the DO levels may change as a result of the planned facility changes. However, since the reported results as percentages of the applicable limits for BOD5 and TSS are so low and the average DO level is well above the required minimum, any increases in BOD5 and TSS and decreases in DO are not likely to cause exceedances of the permit requirements. The Department reserves the right to reinstate the monitoring frequency of three times per week if the permittee does not comply with the permit limits.

Parameter	Avg. Monthly Limit	Any Violations in past 2 years?	Long Term Average of Reported Results	Reported Result as % of Limit	Previous Permit Frequency	Draft Permit Frequency
BOD5	105.1 lbs/day	no	4.23 lbs/day	4	3/week	1/week
TSS	133.1 lbs/day	no	8.93 lbs/day	6.7	3/week	1/week
DO	2.0 mg/l, monthly avg. min.	no	4.67 mg/l	N/A	3/week	1/week
FCB	200 col/100 ml (April – Sept.)	no	<10 col/100 ml	<5%	3/week	1/week
	1000 col/100 ml (Oct. – March)	no	<10 col/100 ml	<1%	3/week	1/week

pH - The monitoring frequency for pH is already at once per month. The EPA Memo does not set minimum monitoring frequencies but does state that the permitting authority may consider other factors specific to the State or facility. The Department often bases monitoring frequencies on the recommended Monitoring Requirements for Non-Municipal NPDES permits which specifies once per month as the least frequent measurement for pH. Therefore, even though the permittee has not reported any violations of the required pH range during the specified time frame, the monitoring frequency for pH will not be reduced.

Request 4: The permittee requested that they not be required to monitor if there is no flow Monday through Friday during a shutdown. Probable shutdown times are Thanksgiving and Christmas.

Response: Part III, Section C, Condition No. 1 of the permit states "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."

Based on the above referenced condition, monitoring is not required if a facility is shut down and there is no effluent being discharged. Additional language does not need to be added to the permit. It is important to note that once per week, which is the required monitoring frequency for BOD5, TSS, and DO, means that monitoring must occur once during the time frame of Sunday through Saturday. Monitoring must be conducted if the facility is discharging on one or more of those days.

Request 5: The Department sent a preliminary draft permit to EPA Region VI for review. This permit used the wastewater treatment plant design flow of 0.280 MGD to calculate the ELG based loading limits. In a letter dated July 2, 2014, EPA Region VI stated that it is their policy to use the actual long term average flow when calculating equivalent mass limits for industrial application since it is considered a more accurate representation of the discharge.

The Department calculated the long term average flow to be 0.091 MGD using the monthly average flows for the months of March 2009 through February 2014. This flow was then used to recalculate the permit limits. On July 17, 2014, the permit writer contacted facility personnel to inform them of the proposed change. The permit writer informed the facility that they could submit a letter in an effort to justify use of a higher flow rate.

In a letter dated July 17, 2014, the permittee stated that the long term average flow of 0.091 MGD is not a true reflection of what the wastewater treatment system can discharge for the following reasons:

- The process is currently limited by the filtration rates through the ULTRA filation units. The rates have never reached the design criteria. The permittee is researching methods to increase filtration rates while maintaining compliance with the permit limits.
- The production rates have been down significantly over the past five years. The facility is in the process of upgrading two units which will increase production. The facility is actively attempting to increase production in other ways at this site.
- The site has discharged more than the proposed monthly average flow rate during several months.

The permittee proposed using the maximum flow from the last five years plus 10%. This would result in using a flow of 0.22 MGD to calculate the loading rates.

Response: 40 CFR 122.45(b)(2)(i) requires the calculation of an industry's permit limits to be based upon a reasonable measure of production or other measure of operation. For facilities subject to the requirements of 40 CFR Part 414, Subparts F, G, H, and I, the mass limits are determined using the concentration listed in the applicable subpart and the EPA's policy of using the long term average effluent flow. The Department is therefore basing the permit limits on the long term average flow of 0.091 MGD.

Because the previous permit used the design flow of the process wastewater treatment plant to calculate the permit limits, the permit writer contacted facility personnel to tell them that the loading limits would be decreasing by approximately 67%. In response to this telephone call, the permittee submitted the letter referenced in Request 5.

40 CFR 122.45(b)(2)(ii)(A)(*1*) allows the Department to include conditions establishing alternate permit limitations based upon anticipated increased production levels and flows provided that the design capacities are not exceeded. The Department will include a second

tier of limits based on the requested flow of 0.22 MGD (Tier II). These limits will become effective when the permittee has certified that the filtration rates have increased or the production increases have occurred.

As stated in Section 5.2.1.3 of the *NPDES Permit Writers' Manual*, the EPA acknowledges the process and treatment systems have inherent variability and therefore incorporated an allowance for this variation into the limitations specified in the effluent guidelines. Therefore, the Tier II limits will not go into effect solely due to an increase in effluent flow. Part II, Condition No. 10, which contains the requirements for the transition from Tier I to Tier II limits, has been added to the permit. See Item #12.A and #12.C.3 of this Fact Sheet for additional information concerning the Tier II limits.

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 practice
BOD_5 - five-day biochemical oxygen demand
BPJ - best professional judgment
BPT - best practicable control technology currently available
$CBOD_5$ - carbonaceous biochemical oxygen demand
CD - critical dilution
CFR - Code of Federal Regulations
cfs - cubic feet per second
COD - chemical oxygen demand
COE - United States Corp of Engineers
CPP - continuing planning process
CWA - Clean Water Act
DMR - discharge monitoring report
DO - dissolved oxygen
ELG - effluent limitation guidelines
EPA - United States Environmental Protection Agency
ESA - Endangered Species Act
FCB - fecal coliform bacteria
gpm - gallons per minute
MGD - million gallons per day
MQL - minimum quantification level
NAICS - North American Industry Classification System
NH3-N - ammonia nitrogen
$NO_3 + NO_2$-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

Compliance and Enforcement History:

Compliance and Enforcement History for this facility can be reviewed by using the following web link:

http://www.adeq.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0037770_Updated%20File%20Review_20140512.pdf

5. FINANCIAL ASSURANCE

Ark. Code Ann. § 8-4-203(b)(1)(A)(i) forbids the Department from issuing a permit to a non-municipal domestic sewage treatment works without the applicant first demonstrating its financial ability to cover the estimated costs of operating and maintaining the system. Ark. Code Ann. § 8-4-203(b)(1)(A)(ii) defines "non-municipal domestic sewage treatment works" as a device or system operated by an entity other than a city, town, county, or sewer improvement district that treats, in whole or in part, waste or wastewater from humans or household operations and must continuously operate to protect human health despite a permittee's failure to maintain or operate the device or system.

This sanitary sewer treatment plant will serve only this facility. If the permittee does not wish to operate the system at a later date, they can shut the facility and the treatment system down. Therefore, continuous operation for the protection of human health and the environment is not needed.

6. 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. Outfall 002 has been added to the permit. The permittee will be allowed to discharge contaminated stormwater, boiler blowdown, cooling tower blowdown, and treated groundwater well filter backwash through this outfall.
2. The monitoring frequencies for BOD5, TSS, DO, and FCB have been reduced.
3. The SWPPP requirements have been replaced with BMP requirements due to the addition of Outfall 002.
4. The sludge disposal method has been included in Part II of the permit.
5. The permit limits are now based on two tiers for flow. Tier I is the long term average flow of 0.091 MGD from the months of March 2009 through February 2014. Tier II is the expected future average flow of 0.22 MGD based upon a letter from the permittee dated July 17, 2014. Both flow rates are lower than the rate used in the previous permit. As a result, all mass limits have decreased. The critical dilution and dilution series used in the required Acute WET tests have also changed based on the new flow rates.
6. Part IB of the permit inlcudes a requirement to submit procedures to the Department for review and comment regarding the conditions under which stormwater with low levels of contaminants may be sent directly to the weir associated with Outfall 001.

7. 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:

Outfall 001: Latitude: 35° 07’ 48.01” Longitude: 90° 07’ 02.57”
Outfall 002: Latitude: 35° 07’ 45” Longitude: 90° 06’ 05”

The receiving waters (for both outfalls) named:

Mississippi River in Segment 6C of the Mississippi River Basin. The receiving stream with USGS Hydrologic Unit Code (H.U.C) of 80101000 and reach #031 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.

8. **303(d) LIST, ENDANGERED SPECIES, AND ANTI-DEGRADATION CONSIDERATIONS.**

A. 303(d) List:

The receiving stream is not listed on the 2008 303(d) list. Therefore no permit action is needed.

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.

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

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

A. Average Flow: **Outfall 001:** Tier I – 0.091 MGD (long term average flow calculated from monthly average flows reported on DMRs for the months of March 2009 through February 2014).
Tier II – 0.22 MGD (expected future average flow. see letter dated 7/17/2014)
Outfall 002: variable

B. Type of Treatment: **Outfall 001:** sanitary wastewater - activated sludge package plant; contaminated stormwater and process wastewater - pH neutralization, 2 equalization tanks, 2 bioreactor tanks, filter press, and ultrafiltration.

The BOD5 test and the TSS test submitted during the previous renewal both showed no detectable amounts of either parameter in the cooling tower blowdown. Boiler blowdown is expected to have similar effluent characteristics. The permittee will be required to test the effluent after the process wastewater, the sanitary wastewater, the cooling tower blowdown, and the boiler blowdown have commingled.

Outfall 002: settling tank (treated groundwater well filter backwash only) and sedimentation pond (all wastewaters). This pond has been in operation for several years as a stormwater pond. See the response to Request 1 in Item #4 of this Fact Sheet for additional information concerning this outfall.

C. Discharge Description: **Outfall 001:** treated sanitary wastewater and process wastewater. The process wastewater consists of cooling tower blowdown, boiler blowdown, contaminated stormwater, stormwater with low levels of contaminants, vacuum pump water, reactor/tank cleaning water, process strip water, scrubber wastewater, and water still bottoms.

Outfall 002: stormwater with low levels of contaminants, cooling tower blowdown, boiler blowdown, and treated groundwater well filter backwash.

For the purposes of this permit only, stormwater with low levels of contaminants is defined as the following:

- Stormwater exceeding 0.5 inches in a 24-hour period;
- No contaminates present in the sump area; and
- Does not include the first 2500 gallons of stormwater removed from the sump area.

Note: All cooling water is obtained from wells. The permittee does not have a cooling water intake structure located at a surface water. Therefore, the requirements of §316(b) of the Clean Water Act do not apply to this facility.

The well water (i.e., groundwater) is filtered prior to use in the facility. The filters are periodically backwashed to allow for proper operation. The backwash water from the filters is sent to the pond associated with Outfall 002 and is described in the permit as "treated groundwater well filter backwash."

D. Facility Status: This facility was evaluated using the NPDES Permit Rating Worksheet (MRAT) to determine the correct permitting status. Since the facility's MRAT score of 90 is higher than 80, this facility is classified as a major industrial.

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

10. **ACTIVITY.**

Under the Standard Industrial Classification (SIC) code of 2869 or North American Industry Classification System (NAICS) code of 325199, the applicant's activities are the operation of an industrial organic chemical manufacturing facility.

11. **SEWAGE SLUDGE AND SOLIDS PRACTICES.**

Sludge from the activated sludge package plant and the solids from the process wastewater treatment system will be hauled off site as necessary. At this time, the sludge and the solids are sent to a Waste Management landfill.

12. **DETERMINATION AND BASIS FOR 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.). All of the information contained in the application, including all of the submitted effluent testing data, was reviewed to determine the need for effluent limits and other permit requirements.

The following is an explanation of the derivation of the conditions of the 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		Previous Permit		Draft Permit	
	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d
OUTFALL 001 – Tier I								
Biochemical Oxygen Demand (BOD5)	> 120 mg/l[3]	N/A	34.15[1]	91.07[2]	105.1	280.2	34.15	91.07
Total Suspended Solids (TSS)	N/A	N/A	43.26	138.89	133.1	427.3	43.26	138.89
Dissolved Oxygen (DO)	2.0 (Monthly Avg. Min.)		N/A		2.0 (Monthly Avg. Min.)		2.0 (Monthly Avg. Min.)	
Acenaphthene	N/A	N/A	0.02	0.04	0.05	0.14	0.02	0.04
Acenaphthylene	N/A	N/A	0.02	0.04	0.05	0.14	0.02	0.04

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Draft Permit	
	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d
Acrylonitrile	N/A	N/A	0.07	0.18	0.22	0.57	0.07	0.18
Anthracene	N/A	N/A	0.02	0.04	0.05	0.14	0.02	0.04
Benzene	N/A	N/A	0.03	0.10	0.09	0.32	0.03	0.10
Benzo(a)anthracene	N/A	N/A	0.02	0.04	0.05	0.14	0.02	0.04
3,4-Benzofluoranthene	N/A	N/A	0.02	0.05	0.05	0.14	0.02	0.05
Benzo(k)fluoranthene	N/A	N/A	0.02	0.04	0.05	0.14	0.02	0.04
Benzo(a)pyrene	N/A	N/A	0.02	0.05	0.05	0.14	0.02	0.05
Bis(2-ethylhexyl)phthalate	N/A	N/A	0.08	0.21	0.24	0.65	0.08	0.21
Carbon Tetrachloride	N/A	N/A	0.01	0.03	0.04	0.09	0.01	0.03
Chlorobenzene	N/A	N/A	0.01	0.02	0.04	0.07	0.01	0.02
Chloroethane	N/A	N/A	0.08	0.20	0.24	0.63	0.08	0.20
Chloroform	N/A	N/A	0.02	0.03	0.05	0.11	0.02	0.03
2-Chlorophenol	N/A	N/A	0.02	0.07	0.07	0.23	0.02	0.07
Chrysene	N/A	N/A	0.02	0.04	0.05	0.14	0.02	0.04
Di-n-butyl phthalate	N/A	N/A	0.02	0.04	0.06	0.13	0.02	0.04
1,2-Dichlorobenzene	N/A	N/A	0.06	0.12	0.18	0.38	0.06	0.12
1,3-Dichlorobenzene	N/A	N/A	0.02	0.03	0.07	0.10	0.02	0.03
1,4-Dichlorobenzene	N/A	N/A	0.01	0.02	0.04	0.07	0.01	0.02
1,1-Dichloroethane	N/A	N/A	0.02	0.04	0.05	0.14	0.02	0.04
1,2-Dichloroethane	N/A	N/A	0.05	0.16	0.16	0.49	0.05	0.16
1,1-Dichloroethylene	N/A	N/A	0.01	0.02	0.04	0.06	0.01	0.02
1,2-trans-Dichloroethylene	N/A	N/A	0.02	0.04	0.05	0.13	0.02	0.04
2,4-Dichlorophenol	N/A	N/A	0.03	0.09	0.09	0.26	0.03	0.09
1,2-Dichloropropane	N/A	N/A	0.12	0.17	0.36	0.54	0.12	0.17
1,3-Dichloropropylene	N/A	N/A	0.02	0.03	0.07	0.10	0.02	0.03

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Draft Permit	
	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d
Diethyl phthalate	N/A	N/A	0.06	0.15	0.19	0.47	0.06	0.15
2,4-Dimethylphenol	N/A	N/A	0.01	0.03	0.04	0.08	0.01	0.03
Dimethyl phthalate	N/A	N/A	0.01	0.04	0.04	0.11	0.01	0.04
4,6-Dinitro-o-cresol	N/A	N/A	0.06	0.21	0.18	0.65	0.06	0.21
2,4-Dinitrophenol	N/A	N/A	0.05	0.09	0.17	0.29	0.05	0.09
2,4-Dinitrotoluene	N/A	N/A	0.09	0.22	0.26	0.67	0.09	0.22
2,6-Dinitrotoluene	N/A	N/A	0.19	0.49	0.60	1.50	0.19	0.49
Ethylbenzene	N/A	N/A	0.02	0.08	0.07	0.25	0.02	0.08
Fluoranthene	N/A	N/A	0.02	0.05	0.06	0.16	0.02	0.05
Fluorene	N/A	N/A	0.02	0.04	0.05	0.14	0.02	0.04
Hexachlorobenzene	N/A	N/A	0.01	0.02	0.04	0.07	0.01	0.02
Hexachlorobutadiene	N/A	N/A	0.02	0.04	0.05	0.11	0.02	0.04
Hexachloroethane	N/A	N/A	0.02	0.04	0.05	0.13	0.02	0.04
Methyl Chloride	N/A	N/A	0.07	0.14	0.20	0.44	0.07	0.14
Methylene Chloride	N/A	N/A	0.03	0.07	0.09	0.21	0.03	0.07
Naphthalene	N/A	N/A	0.02	0.04	0.05	0.14	0.02	0.04
Nitrobenzene	N/A	N/A	0.02	0.05	0.06	0.16	0.02	0.05
2-Nitrophenol	N/A	N/A	0.03	0.05	0.10	0.16	0.03	0.05
4-Nitrophenol	N/A	N/A	0.05	0.09	0.17	0.29	0.05	0.09
Phenanthrene	N/A	N/A	0.02	0.04	0.05	0.14	0.02	0.04
Phenol	N/A	N/A	0.01	0.02	0.04	0.06	0.01	0.02
Pyrene	N/A	N/A	0.02	0.05	0.06	0.16	0.02	0.05
Tetrachloroethylene	N/A	N/A	0.02	0.04	0.05	0.13	0.02	0.04
Toluene	N/A	N/A	0.02	0.06	0.06	0.19	0.02	0.06
Total Chromium	N/A	N/A	0.84	2.10	2.59	6.47	0.84	2.10

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Draft Permit	
	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d
Total Copper	1323.56	2655.65	1.10	2.57	3.39	7.89	1.10	2.57
Total Lead	1878.96	3770.03	0.24	0.52	0.75	1.61	0.24	0.52
Total Nickel	51816.12	103966.5	1.28	3.02	3.95	9.29	1.28	3.02
Total Zinc	10864.18	21798.45	0.80	1.98	2.45	6.09	0.80	1.98
1,2,4-Trichlorobenzene	N/A	N/A	0.05	0.11	0.16	0.33	0.05	0.11
1,1,1-Trichloroethane	N/A	N/A	0.02	0.04	0.05	0.13	0.02	0.04
1,1,2-Trichloroethane	N/A	N/A	0.02	0.04	0.05	0.13	0.02	0.04
Trichloroethylene	N/A	N/A	0.02	0.04	0.05	0.13	0.02	0.04
Vinyl Chloride	N/A	N/A	0.08	0.20	0.24	0.63	0.08	0.20
Fecal Coliform Bacteria (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
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.	
Outfall 001 – Tier II								
Biochemical Oxygen Demand (BOD5)	> 120 mg/l	N/A	82.57[1]	220.18[2]	105.1	280.2	82.57	220.18
Total Suspended Solids (TSS)	N/A	N/A	104.58	335.77	133.1	427.3	104.58	335.77
Dissolved Oxygen (DO)	2.0 (Monthly Avg. Min.)		N/A		2.0 (Monthly Avg. Min.)		2.0 (Monthly Avg. Min.)	
Acenaphthene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
Acenaphthylene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
Acrylonitrile	N/A	N/A	0.18	0.44	0.22	0.57	0.18	0.44
Anthracene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
Benzene	N/A	N/A	0.07	0.25	0.09	0.32	0.07	0.25
Benzo(a)anthracene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
3,4-Benzofluoranthene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Draft Permit	
	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d
Benzo(k)fluoranthene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
Benzo(a)pyrene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
Bis(2-ethylhexyl)phthalate	N/A	N/A	0.19	0.51	0.24	0.65	0.19	0.51
Carbon Tetrachloride	N/A	N/A	0.03	0.07	0.04	0.09	0.03	0.07
Chlorobenzene	N/A	N/A	0.03	0.05	0.04	0.07	0.03	0.05
Chloroethane	N/A	N/A	0.19	0.49	0.24	0.63	0.19	0.49
Chloroform	N/A	N/A	0.04	0.08	0.05	0.11	0.04	0.08
2-Chlorophenol	N/A	N/A	0.06	0.18	0.07	0.23	0.06	0.18
Chrysene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
Di-n-butyl phthalate	N/A	N/A	0.05	0.10	0.06	0.13	0.05	0.10
1,2-Dichlorobenzene	N/A	N/A	0.14	0.30	0.18	0.38	0.14	0.30
1,3-Dichlorobenzene	N/A	N/A	0.06	0.08	0.07	0.10	0.06	0.08
1,4-Dichlorobenzene	N/A	N/A	0.03	0.05	0.04	0.07	0.03	0.05
1,1-Dichloroethane	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
1,2-Dichloroethane	N/A	N/A	0.12	0.39	0.16	0.49	0.12	0.39
1,1-Dichloroethylene	N/A	N/A	0.03	0.05	0.04	0.06	0.03	0.05
1,2-trans-Dichloroethylene	N/A	N/A	0.04	0.10	0.05	0.13	0.04	0.10
2,4-Dichlorophenol	N/A	N/A	0.07	0.21	0.09	0.26	0.07	0.21
1,2-Dichloropropane	N/A	N/A	0.28	0.42	0.36	0.54	0.28	0.42
1,3-Dichloropropylene	N/A	N/A	0.05	0.08	0.07	0.10	0.05	0.08
Diethyl phthalate	N/A	N/A	0.15	0.37	0.19	0.47	0.15	0.37
2,4-Dimethylphenol	N/A	N/A	0.03	0.07	0.04	0.08	0.03	0.07
Dimethyl phthalate	N/A	N/A	0.03	0.09	0.04	0.11	0.03	0.09
4,6-Dinitro-o-cresol	N/A	N/A	0.14	0.51	0.18	0.65	0.14	0.51
2,4-Dinitrophenol	N/A	N/A	0.13	0.23	0.17	0.29	0.13	0.23

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Draft Permit	
	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d
2,4-Dinitrotoluene	N/A	N/A	0.21	0.52	0.26	0.67	0.21	0.52
2,6-Dinitrotoluene	N/A	N/A	0.47	1.18	0.60	1.50	0.47	1.18
Ethylbenzene	N/A	N/A	0.06	0.20	0.07	0.25	0.06	0.20
Fluoranthene	N/A	N/A	0.05	0.12	0.06	0.16	0.05	0.12
Fluorene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
Hexachlorobenzene	N/A	N/A	0.03	0.05	0.04	0.07	0.03	0.05
Hexachlorobutadiene	N/A	N/A	0.04	0.09	0.05	0.11	0.04	0.09
Hexachloroethane	N/A	N/A	0.04	0.10	0.05	0.13	0.04	0.10
Methyl Chloride	N/A	N/A	0.16	0.35	0.20	0.44	0.16	0.35
Methylene Chloride	N/A	N/A	0.07	0.16	0.09	0.21	0.07	0.16
Naphthalene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
Nitrobenzene	N/A	N/A	0.05	0.12	0.06	0.16	0.05	0.12
2-Nitrophenol	N/A	N/A	0.08	0.13	0.10	0.16	0.08	0.13
4-Nitrophenol	N/A	N/A	0.13	0.23	0.17	0.29	0.13	0.23
Phenanthrene	N/A	N/A	0.04	0.11	0.05	0.14	0.04	0.11
Phenol	N/A	N/A	0.03	0.05	0.04	0.06	0.03	0.05
Pyrene	N/A	N/A	0.05	0.12	0.06	0.16	0.05	0.12
Tetrachloroethylene	N/A	N/A	0.04	0.10	0.05	0.13	0.04	0.10
Toluene	N/A	N/A	0.05	0.15	0.06	0.19	0.05	0.15
Total Chromium	N/A	N/A	2.04	5.08	2.59	6.47	2.04	5.08
Total Copper	1323.6	2655.7	2.66	6.20	3.39	7.89	2.66	6.20
Total Lead	1879.0	3770.1	0.59	1.27	0.75	1.61	0.59	1.27
Total Nickel	51816.5	103967.2	3.10	7.30	3.95	9.29	3.10	7.30
Total Zinc	10864.5	21799.1	1.93	4.79	2.45	6.09	1.93	4.79
1,2,4-Trichlorobenzene	N/A	N/A	0.12	0.26	0.16	0.33	0.12	0.26

Parameter	Water Quality-Based		Technology-Based		Previous Permit		Draft Permit	
	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d	Monthly Avg. lb/d	Daily Max. lb/d
1,1,1-Trichloroethane	N/A	N/A	0.04	0.10	0.05	0.13	0.04	0.10
1,1,2-Trichloroethane	N/A	N/A	0.04	0.10	0.05	0.13	0.04	0.10
Trichloroethylene	N/A	N/A	0.04	0.10	0.05	0.13	0.04	0.10
Vinyl Chloride	N/A	N/A	0.19	0.49	0.24	0.63	0.19	0.49
Fecal Coliform Bacteria (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
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.	
OUTFALL 002								
COD (mg/l)	N/A	N/A	Report	Report	N/A	N/A	Report	Report
TSS (mg/l)	N/A	N/A	Report	Report	N/A	N/A	Report	Report
O & G (mg/l)	10	15	N/A	N/A	N/A	N/A	10	15
pH	6.0 - 9.0 s.u.		N/A		N/A		6.0 - 9.0 s.u.	

1. Technology based monthly average mass limit was calculated using a concentration of 45 mg/l.
2. The daily maximum technology based mass limit were calculated using a concentration of 120 mg/l.
3. Since the water quality based concentration limit is less stringent than the concentration used to calculate the technology based limits, the technology based limits will be placed in the permit.

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

Parameter	Water Quality or Technology	Justification
OUTFALL 001 – Tier I and Tier II		
BOD5	Technology	40 CFR §414.81, Settlement Agreement with EPA, 40 CFR 122.44(l), and previous permit
TSS	Technology	40 CFR §414.81, Settlement Agreement with EPA, 40 CFR 122.44(l), and previous permit
DO	Water Quality	§2.505 of APCEC Regulation No. 2
Acenaphthene	Technology	40 CFR §414.91

Parameter	Water Quality or Technology	Justification
Acenaphthylene	Technology	40 CFR §414.91
Acrylonitrile	Technology	40 CFR §414.91
Anthracene	Technology	40 CFR §414.91
Benzene	Technology	40 CFR §414.91
Benzo(a)anthracene	Technology	40 CFR §414.91
3,4-Benzofluoranthene	Technology	40 CFR §414.91
Benzo(k)fluoranthene	Technology	40 CFR §414.91
Benzo(a)pyrene	Technology	40 CFR §414.91
Bis(2-ethylhexyl)phthalate	Technology	40 CFR §414.91
Carbon Tetrachloride	Technology	40 CFR §414.91
Chlorobenzene	Technology	40 CFR §414.91
Chloroethane	Technology	40 CFR §414.91
Chloroform	Technology	40 CFR §414.91
2-Chlorophenol	Technology	40 CFR §414.91
Chrysene	Technology	40 CFR §414.91
Di-n-butyl phthalate	Technology	40 CFR §414.91
1,2-Dichlorobenzene	Technology	40 CFR §414.91
1,3-Dichlorobenzene	Technology	40 CFR §414.91
1,4-Dichlorobenzene	Technology	40 CFR §414.91
1,1-Dichloroethane	Technology	40 CFR §414.91
1,2-Dichloroethane	Technology	40 CFR §414.91
1,1-Dichloroethylene	Technology	40 CFR §414.91
1,2-trans-Dichloroethylene	Technology	40 CFR §414.91
2,4-Dichlorophenol	Technology	40 CFR §414.91
1,2-Dichloropropane	Technology	40 CFR §414.91
1,3-Dichloropropylene	Technology	40 CFR §414.91
Diethyl phthalate	Technology	40 CFR §414.91
2,4-Dimethylphenol	Technology	40 CFR §414.91
Dimethyl phthalate	Technology	40 CFR §414.91
4,6-Dinitro-o-cresol	Technology	40 CFR §414.91
2,4-Dinitrophenol	Technology	40 CFR §414.91
2,4-Dinitrotoluene	Technology	40 CFR §414.91
2,6-Dinitrotoluene	Technology	40 CFR §414.91
Ethylbenzene	Technology	40 CFR §414.91
Fluoranthene	Technology	40 CFR §414.91
Fluorene	Technology	40 CFR §414.91
Hexachlorobenzene	Technology	40 CFR §414.91
Hexachlorobutadiene	Technology	40 CFR §414.91
Hexachloroethane	Technology	40 CFR §414.91

Parameter	Water Quality or Technology	Justification
Methyl Chloride	Technology	40 CFR §414.91
Methylene Chloride	Technology	40 CFR §414.91
Naphthalene	Technology	40 CFR §414.91
Nitrobenzene	Technology	40 CFR §414.91
2-Nitrophenol	Technology	40 CFR §414.91
4-Nitrophenol	Technology	40 CFR §414.91
Phenanthrene	Technology	40 CFR §414.91
Phenol	Technology	40 CFR §414.91
Pyrene	Technology	40 CFR §414.91
Tetrachloroethylene	Technology	40 CFR §414.91
Toluene	Technology	40 CFR §414.91
Total Chromium	Technology	40 CFR §414.91
Total Copper	Technology	40 CFR §414.91
Total Lead	Technology	40 CFR §414.91
Total Nickel	Technology	40 CFR §414.91
Total Zinc	Technology	40 CFR §414.91
1,2,4-Trichlorobenzene	Technology	40 CFR §414.91
1,1,1-Trichloroethane	Technology	40 CFR §414.91
1,1,2-Trichloroethane	Technology	40 CFR §414.91
Trichloroethylene	Technology	40 CFR §414.91
Vinyl Chloride	Technology	40 CFR §414.91
FCB	Water Quality	Reg. 2.507
pH	Water Quality	Reg. 2.504
OUTFALL 002		
COD	Technology	ARR000000
TSS	Technology	ARR000000
O & G	Water Quality	Reg. 2.510
pH	Water Quality	Reg. 2.504

Outfall 001

The mass limits are changing based on the use of the long term average flows instead of the design flow of the treatment plant. Tier I limits are based on the actual long term average flow of 0.091 MGD while the Tier II limits are based on the projected long term average flow of 0.22 MGD. The Tier II limits will become effective when the permittee certifies that the filtration rates have increased or the production increases have occurred. See Item #4 - Request #5 and its Response in this Fact Sheet for additional information concerning the two tiers of limits.

Only mass limits have been included in the permit with the exception of those parameters (FCB and pH) which cannot be expressed in terms of mass (i.e., lbs/day). 40 CFR §414.81 and 40 CFR §414.91 specifically state that any point source subject to the subpart must achieve discharges not exceeding the quantity (mass) determined using the concentrations in the tables. These subparts do not require nor do they limit the concentration of any parameters in the effluent. Also, due to the ratio of the 7Q10 of the receiving stream to effluent flow (275,081:1), concentration limits are not necessary.

For information concerning the Settlement Agreement and its affect on the BOD5 and TSS limits, please see Item #12.C.3 of this Fact Sheet.

Outfall 002

40 CFR 122.44(k) allows for the use of BMPs in permits to control or abate the discharge of pollutants when necessary for the control of stormwater discharges. As stated in the following paragraphs, benchmark values for COD and TSS have been included in Part II of the permit. Benchmark data are primarily used to determine the overall effectiveness of BMPs and control measures in controlling the discharge of pollutants to the environment and to assist the facility in knowing when additional corrective action may be necessary.

COD - This is the most representative measure of oxygen demand for stormwater. This test can readily indicate the presence of spilled oils and fuels from vehicles and equipment and also of organic matter which may be found in stormwater discharges.

TSS - Reg. 2.408 states that there shall not be any formation of slime, bottom deposits, or sludge banks due to a facility's discharge. Many raw and finished materials are stored outside at an industrial facility and have the potential to be exposed to stormwater. Suspended solids carried by stormwater from an industrial facility can contain metals and other pollutants.

Monitoring of COD and TSS is needed to ensure the narrative criteria are met and to ensure the effectiveness of any on-site BMPs. The permittee will be required to initiate a Corrective Action Plan (CAP) if the benchmark values are exceeded for either parameter. The benchmark values and the requirements are what is required in the general permit for stormwater runoff associated with industrial activity (ARR000000). It is important to note that an exceedance of the benchmark value does not constitute a violation of the permit.

O & G – O & G are typically present in some form at industrial facilities. Measurement of the O & G levels helps to ensure that adequate BMPs are in place and that the receiving stream and its intended uses are protected.

pH – pH is a measure of acidity and alkalinity in a solution. Measurement of the pH helps to ensure that the receiving stream and its intended uses are protected.

Only monitoring and reporting is required for COD and TSS since Reg. 2 only contains narrative and not numerical water quality standards for those parameters. Numerical standards for O & G and pH are set forth in Regs. 2.510 and 2.504, respectively.

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.

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) at Outfall 001 uses long term average flows of 0.091 MGD (Tier I), 0.22 MGD (Tier II) and the following equation:

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

   Mass limits have not been included in the permit for Outfall 002. The flow from this outfall consists mainly of stormwater and will therefore be highly variable.

2. Daily Maximum Limits:

   Outfall 001

   The daily maximum limits for FCB are based on Reg. 2.507. The daily maximums for all other parameters at Outfall 001 are based on the applicable ELGs. See Item #12.C.3 for additional information.

Outfall 002

The daily maximum limit for O & G is based on Reg. 2.510.

3. Applicable Effluent Limitations Guidelines

Process wastewater (Outfall 001)

The permittee is subject to the requirements of 40 CFR Part 414, Subparts F, G, H, and I – Organic Chemicals, Plastics, and Synthetic Fibers, Commodity Organic Chemicals (Subpart F), Bulk Organic Chemicals (Subpart G), Specialty Organic Chemicals (Subpart H), and Direct Discharge Point Sources That Use End of Pipe Biological Treatment (Subpart I).

The sanitary wastewater treatment plant has a design flow of 0.005 MGD. The actual average flow is only 1.79% of the design flow (0.280 MGD) of the treatment system for the process wastewater. A properly operated activated sludge package plant should produce an effluent where the BOD5 and the TSS are below 30 mg/l. At a concentration of 30 mg/l and the design flow of the sanitary wastewater treatment plant, the expected loadings are as follows:

Mass, lb/d = Qe, MGD * Ce, mg/l * 8.34 (conversion factor)

Where:

Qe = average sanitary sewer flow = 0.005 MGD
Ce = max. expected conc. for TSS and BOD5 in treated sanitary ww = 30 mg/l

Mass = 0.005 * 30 * 8.34 = 1.3 lb/day

Therefore, due to the comparatively low design flow and expected BOD5 and TSS levels, the sanitary wastewater will not be separated out from the process wastewater.

The current long term average flow for this facility at Outfall 001 is 0.091 MGD. The Tier I permit limits are based on that flow. The permittee has stated that they are investigating methods for increasing the flows through the filtration unit in the process wastewater treatment plant. The permittee also stated that they will be increasing production at this facility in the next two years which would increase flow to the wastewater treatment plant. Therefore, Tier II limits have been included in the permit and are based on a flow of 0.22 MGD. See Request #5 and the Department's response in Item #4 of this Fact Sheet for additional information.

Subparts F, G, and H

The permittee entered into a Settlement Agreement with the EPA effective July 12, 2001. Under this Settlement Agreement, the EPA concluded that the permittee demonstrated that the criteria for granting a fundamentally different factors variance set out in 40 CFR §125.31(a)(1), (2), and (3) and 40 CFR §125.31(b)(3) had been satisfied. The Settlement Agreement stated that new BOD5 and TSS limitations would be developed after at least one year's worth of data had been gathered from the new treatment plant. (The new treatment plant first came on line in October 2005). A copy of the Settlement Agreement may be found using the following link:

http://www.adeq.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0037770_Settlement%20Agreement_20071212.pdf

BOD5

Prior to issuance of the previous permit, the BOD5 test results were highly variable, even when conducted on split samples. Therefore, the previous permit contained interim mass limits for BOD5 based on the 95th percentile of the available data. The final limits were based on the concentrations contained in 40 CFR 414.81, 45 mg/l on a monthly average and 120 mg/l on a daily maximum. The previous permit contained a provision that the facility could request a major permit modification if they were able to demonstrate that they could not meet the final limits during the interim period.

During the interim period, the permittee demonstrated that the treatment system could meet the final BOD5 limits so a major permit modification was not requested. The concentrations used to calculate the final BOD5 mass limits are not changing with this permit modification. The mass limits are calculated using the formula and the flows set forth in Item #12.C.1 of this Fact Sheet.

A copy of the previous permit may be found using the following web link:

http://www.adeq.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/IssuedPermits/AR0037770_Renewal_20081231.pdf

TSS

Prior to issuance of the previous permit, the facility demonstrated that they were able to meet the TSS limits contained in 40 CFR 414.81, 57 mg/l on a monthly average and 183 mg/l on a daily maximum, while operating the treatment plant. Therefore, the previous permit contained mass limits based on those concentrations. These concentrations, which were based on a review of the effluent data from this facility under a Settlement Agreement with the US EPA, are not changing with this permit

renewal. The mass limits are calculated using the formula and the flows set forth in Item #12.C.1 of this Fact Sheet.

pH

The acceptable pH range of 6.0 – 9.0 s.u. contained in this subpart is identical to the pH standards set forth in Section 2.504 of APCEC Regulation No. 2.

Subpart I

40 CFR 414.91 allows for the Department to consider any cyanide bearing waste streams separately from the other streams at this facility when determining the cyanide limits. The permittee does not have any cyanide bearing waste streams at this facility. The Department will therefore not include cyanide in the permit.

The mass limits are calculated using the formula set forth in Item #12.C.1 of this Fact Sheet.

Parameter	AML, µg/l	DML, µg/l	Tier I Limits, 0.091 MGD		Tier II Limits, 0.22 MGD	
			AML, lb/day	DML, lb/day	AML, lb/day	DML, lb/day
Acenaphthene	22	59	0.02	0.04	0.04	0.11
Acenaphthylene	22	59	0.02	0.04	0.04	0.11
Acrylonitrile	96	242	0.07	0.18	0.18	0.44
Anthracene	22	59	0.02	0.04	0.04	0.11
Benzene	37	136	0.03	0.10	0.07	0.25
Benzo(a)anthracene	22	59	0.02	0.04	0.04	0.11
3,4-Benzofluoranthene	23	61	0.02	0.05	0.04	0.11
Benzo(k)fluoranthene	22	59	0.02	0.04	0.04	0.11
Benzo(a)pyrene	23	61	0.02	0.05	0.04	0.11
Bis(2-ethylhexyl)phthalate	103	279	0.08	0.21	0.19	0.51
Carbon Tetrachloride	18	38	0.01	0.03	0.03	0.07
Chlorobenzene	15	28	0.01	0.02	0.03	0.05
Chloroethane	104	268	0.08	0.20	0.19	0.49
Chloroform	21	46	0.02	0.03	0.04	0.08
2-Chlorophenol	31	98	0.02	0.07	0.06	0.18
Chrysene	22	59	0.02	0.04	0.04	0.11
Di-n-butyl phthalate	27	57	0.02	0.04	0.05	0.10
1,2-Dichlorobenzene	77	163	0.06	0.12	0.14	0.30
1,3-Dichlorobenzene	31	44	0.02	0.03	0.06	0.08

Parameter	AML, µg/l	DML, µg/l	Tier I Limits, 0.091 MGD		Tier II Limits, 0.22 MGD	
			AML, lb/day	DML, lb/day	AML, lb/day	DML, lb/day
1,4-Dichlorobenzene	15	28	0.01	0.02	0.03	0.05
1,1-Dichloroethane	22	59	0.02	0.04	0.04	0.11
1,2-Dichlorethane	68	211	0.05	0.16	0.12	0.39
1,1-Dichloroethylene	16	25	0.01	0.02	0.03	0.05
1,2-trans-Dichloroethylene	21	54	0.02	0.04	0.04	0.10
2,4-Dichlorophenol	39	112	0.03	0.09	0.07	0.21
1,2-Dichloropropane	153	230	0.12	0.17	0.28	0.42
1,3-Dichloropropylene	29	44	0.02	0.03	0.05	0.08
Diethyl phthalate	81	203	0.06	0.15	0.15	0.37
2,4-Dimethylphenol	18	36	0.01	0.03	0.03	0.07
Dimethyl phthalate	19	47	0.01	0.04	0.03	0.09
4,6-Dinitro-o-cresol	78	277	0.06	0.21	0.14	0.51
2,4-Dinitrophenol	71	123	0.05	0.09	0.13	0.23
2,4-Dinitrotoluene	113	285	0.09	0.22	0.21	0.52
2,6-Dinitrotoluene	255	641	0.19	0.49	0.47	1.18
Ethylbenzene	32	108	0.02	0.08	0.06	0.20
Fluoranthene	25	68	0.02	0.05	0.05	0.12
Fluorene	22	59	0.02	0.04	0.04	0.11
Hexachlorobenzene	15	28	0.01	0.02	0.03	0.05
Hexachlorobutadiene	20	49	0.02	0.04	0.04	0.09
Hexachloroethane	21	54	0.02	0.04	0.04	0.10
Methyl Chloride	86	190	0.07	0.14	0.16	0.35
Methylene Chloride	40	89	0.03	0.07	0.07	0.16
Naphthalene	22	59	0.02	0.04	0.04	0.11
Nitrobenzene	27	68	0.02	0.05	0.05	0.12
2-Nitrophenol	41	69	0.03	0.05	0.08	0.13
4-Nitrophenol	72	124	0.05	0.09	0.13	0.23
Phenanthrene	22	59	0.02	0.04	0.04	0.11
Phenol	15	26	0.01	0.02	0.03	0.05
Pyrene	25	67	0.02	0.05	0.05	0.12
Tetrachloroethylene	22	56	0.02	0.04	0.04	0.10
Toluene	26	80	0.02	0.06	0.05	0.15
Total Chromium	1110	2770	0.84	2.10	2.04	5.08
Total Copper	1450	3380	1.10	2.57	2.66	6.20
Total Lead	320	690	0.24	0.52	0.59	1.27
Total Nickel	1690	3980	1.28	3.02	3.10	7.30
Total Zinc	1050	2610	0.80	1.98	1.93	4.79

Parameter	AML, µg/l	DML, µg/l	Tier I Limits, 0.091 MGD		Tier II Limits, 0.22 MGD	
			AML, lb/day	DML, lb/day	AML, lb/day	DML, lb/day
1,2,4-Trichlorobenzene	68	140	0.05	0.11	0.12	0.26
1,1,1-Trichloroethane	21	54	0.02	0.04	0.04	0.10
1,1,2-Trichloroethane	21	54	0.02	0.04	0.04	0.10
Trichloroethylene	21	54	0.02	0.04	0.04	0.10
Vinyl Chloride	104	268	0.08	0.20	0.19	0.49

4. Stormwater Runoff

   Stormwater runoff associated with industrial activity will be discharged through Outfall 002. Contaminated stormwater runoff may be discharged through Outfall 001. Stormwater with low levels of contaminants as defined in Part II, Condition No. 11 of the permit may be discharged through Outfall 001 or Outfall 002. Since numerical limits have been included in this permit for both outfalls (O & G and pH at Outfall 002) and Part II contains benchmarks for Outfall 002 (COD and TSS), Part II contains BMP requirements.

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 clarify that the water quality based limits are as follows:

Year-round: BOD5/DO = > 120/2.0 mg/l

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
Flow = Q	0.22 MGD = 0.34 cfs	Application
7Q10	119,000 cfs	U.S.G.S.
TSS	8 mg/l	CPP
Hardness as CaCo3	81 mg/l	CPP
pH	7.0 s.u.	Neutral pH used since no data available.

The pollutants in the following tables were reported above the required MQL or a lower MQL used with an EPA approved test method. Instream Waste Concentrations (IWC's) were calculated in the manner described in Appendix D of the CPP and compared to the applicable Water Quality Standards. The Tier II flow (0.22 MGD) was used in these calculations since it is a higher percentage of the stream flow than the Tier I flow (0.091 MGD). Use of the Tier II flow will therefore provide a worse case scenario in determining if reasonable potential for water quality violations exist.

The following tables summarize the results of the analysis. The complete evaluation can be viewed on the Department's website at the following address:

http://www.adeq.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0037770_Tier%20II%20PPS_20140804.pdf

1. **Aquatic Toxicity Evaluation**

   a. Acute Criteria Evaluation

Substance	Concentration Reported (C_e) µg/l	C_e X 2.13[1]	Instream Waste Concentration (IWC)	Water Quality Standards (WQS)	Reasonable Potential (Yes/No)
			Acute, µg/l	Acute, µg/l	
Antimony, Total Recoverable	2.16	4.6008	0.00022	N/A	No
Cadmium, Total Recoverable	0.279	0.59427	0.0000028	11.94	No

Substance	Concentration Reported (C_e) µg/l	C_e X 2.13[1]	Instream Waste Concentration (IWC)	Water Quality Standards (WQS)	Reasonable Potential (Yes/No)
			Acute, µg/l	Acute, µg/l	
Chromium, Total Recoverable	2.39	5.0907	0.00024	N/A	No
Copper, Total Recoverable	16.2	34.506	0.0016	38.87	No
Mercury, Total Recoverable	0.00493	0.0105009	0.00000050	6.46	No
Nickel, Total Recoverable	11.9	25.347	0.0012	2603.30	No
Selenium, Total Recoverable	22.6	48.138	0.0023	20	No
Silver, Total Recoverable	1.91	4.0683	0.00019	7.82	No
Zinc, Total Recoverable	80.4	171.252	0.0082	319.04	No
Methyl Chloride (Chloromethane)	26.1	55.593	0.0026	N/A	No
Methylene Chloride	13.8	29.394	0.0014	N/A	No
Aldrin	0.05165	0.1100145	0.0000052	3	No
Alpha-BHC	0.2481	0.528453	0.000025	N/A	No
Beta-BHC	0.03909	0.0832617	0.0000040	N/A	No
Heptachlor	0.046	0.09798	0.0000047	0.52	No

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

b. Chronic Criteria Evaluation

Substance	Concentration Reported (C_e) µg/l	C_e X 2.13[1]	Instream Waste Concentration (IWC)	Water Quality Standards (WQS)	Reasonable Potential (Yes/No)
			Chronic, µg/l	Chronic, µg/l	
Antimony, Total Recoverable	2.16	4.6008	0.000053	N/A	No
Cadmium, Total Recoverable	0.279	0.59427	0.0000068	3.58	No

Substance	Concentration Reported (C_e) µg/l	C_e X 2.13[1]	Instream Waste Concentration (IWC)	Water Quality Standards (WQS)	Reasonable Potential (Yes/No)
			Chronic, µg/l	Chronic, µg/l	
Chromium, Total Recoverable	2.39	5.0907	0.000058	N/A	No
Copper, Total Recoverable	16.2	34.506	0.00039	26.41	No
Mercury, Total Recoverable	0.00493	0.0105009	0.000000120	0.012	No
Nickel, Total Recoverable	11.9	25.347	0.00029	289.12	No
Selenium, Total Recoverable	22.6	48.138	0.00055	5	No
Silver, Total Recoverable	1.91	4.0683	0.000046	N/A	No
Zinc, Total Recoverable	80.4	171.252	0.0014	291.3	No
Methyl Chloride (Chloromethane)	26.1	55.593	0.00064	N/A	No
Methylene Chloride	13.8	29.394	0.00034	N/A	No
Aldrin	0.05165	0.1100145	0.0000013	N/A	No
Alpha-BHC	0.2481	0.528453	0.0000060	N/A	No
Beta-BHC	0.03909	0.0832617	0.00000095	N/A	No
Heptachlor	0.046	0.09798	0.0000011	0.0038	No

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

As can be seen in the tables above, the calculated IWC's for the pollutants in the following table are significantly lower than the Water Quality Standards. However, water quality based limits must be calculated for comparison with the technology based limits. The applicable water quality based limits are as follows. For comparison with the technology based limits, loading limits were calculated using the following concentrations, the average flows, and the formula contained in #12.C.1 of this Fact Sheet.

Final Limits		
Parameter	Monthly Average µg/l	Daily Maximum µg/l
Copper, Total Recoverable	721,382.19	1,447,418.46
Lead, Total Recoverable	1,024,072.11	2,054,751.13
Nickel, Total Recoverable	28,240,936.80	56,664,073.18
Zinc, Total Recoverable	5,921,345.00	11,880,892.22

13. **WHOLE EFFLUENT TOXICITY.**

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

Whole effluent toxicity (WET) testing is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. It is the national policy of EPA to use bioassays as a measure of toxicity to allow evaluation of the effects of a discharge upon a receiving water (49 Federal Register 9016-9019, March 9, 1984). EPA Region 6 and the State of Arkansas are now implementing the Post Third Round Policy and Strategy established on September 9, 1992.

Whole effluent toxicity testing of the effluent is thereby required as a condition of this permit to assess potential toxicity. The whole effluent toxicity testing procedures stipulated as a condition of this permit are as follows:

TOXICITY TESTS	**FREQUENCY**
48 hour Acute WET	Once/quarter

Requirements for measurement frequency are based on the CPP.

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

The calculations for dilution used for the acute WET testing are as follows:

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

Tier I

Qd = Average Flow = 0.091 MGD = 0.14 cfs
7Q10 = 119,000 cfs
Qb = Background flow = 0.1 X 0.25 X 7Q10 = 2975 cfs
CD = ((0.14) / (0.14 + 2975)) X 100 = 0.005%

Tier II

Qd = Average Flow = 0.22 MGD = 0.34 cfs
7Q10 = 119,000 cfs
Qb = Background flow = 0.1 X 0.25 X 7Q10 = 2975 cfs
CD = ((0.34) / (0.34 + 2975)) X 100 = 0.012%

Toxicity tests shall be performed in accordance with protocols described in "Methods for Measuring the Acute Toxicity of Effluent to Freshwater and Marine Organisms", EPA/600/4-90/027. 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 for Tier I are 0.002%, 0.003%, 0.004%, 0.005%, and 0.007% (See the CPP). These additional effluent concentrations for Tier II are 0.0051%, 0.0068%, 0.009%, 0.012%, and 0.016%. The low-flow effluent concentration (critical dilution) is defined as 0.005% effluent for Tier I and 0.012% effluent for Tier II. The requirement for acute WET tests is based on the magnitude of the facility's discharge with respect to receiving stream flow. The stipulated test species *Daphnia pulex* and the Fathead minnow (*Pimephales promelas*) are representative of organisms indigenous to the geographic area of the facility; the use of these is consistent with the requirements of the State water quality standards. The WET testing frequency has been established to provide data representative of the toxic potential of the facility's discharge, in accordance with the regulations promulgated at 40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be reported according to EPA-821-R-02-012, 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 summarized toxicity test submitted by the permittee during the term of the current permit at Outfall 001.

Permit Number:	AR0037770		AFIN:	18-00081	Outfall Number: 001
Date of Review:	7/15/2014		Reviewer:	Cyndi Porter	
Facility Name:	BASF Corp.				
Previous Dilution series:	0.0068, 0.009, 0.012, 0.015, 0.02	Previous Critical Dilution:		0.015	
Tier 1 Proposed Dilution Series:	0.002, 0.003, 0.004, 0.005, 0.007	Tier 1 Proposed Critical Dilution:		0.005	
Tier 2 Proposed Dilution Series:	0.0051, 0.0068, 0.009, 0.012, 0.016	Tier 2 Proposed Critical Dilution:		0.012	
Previous TRE activities:	None				

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

TEST DATA SUMMARY

	Vertebrate		Invertebrate	
TEST DATE	Lethal		Lethal	
	NOEC		NOEC	
3/6/2009	0.021		0.021	
6/6/2009	0.021		0.021	
9/1/2009	0.021		0.021	
12/31/2009	0.021		0.021	
3/31/2010	0.021		0.021	
6/30/2010	0.021		0.021	
9/30/2010	0.02		0.02	
12/31/2010	0.02		0.02	
3/31/2011	0.02		0.02	
6/30/2011	0.02		0.02	
9/30/2011	0.02		0.02	
12/31/2011	0.02		0.02	
3/31/2012	0.02		0.02	
6/30/2012	0.02		0.02	
9/30/2012	0.02		0.02	
12/31/2012	0.02		0.02	
3/30/2013	0.02		0.02	
6/30/2013	0.02		0.02	
9/30/2013	0.02		0.02	
12/31/2013	0.02		0.02	

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal		**Invertebrate Lethal**	
Min NOEC Observed	0.02		0.02	
TU at Min Observed	5000.00		5000.00	
Count	20		20	
Failure Count	0		0	
Mean	4928.571		4928.571	
Std. Dev.	111.943		111.943	
CV	0		0	
RPMF	0		0	
Reasonable Potential	0.000		0.000	
100/Critical dilution	20000.000		20000.000	
Does Reasonable Potential Exist	No		No	

PERMIT ACTION

P. promelas lethal -	monitoring
D. pulex lethal -	monitoring

14. **SAMPLE TYPE AND FREQUENCY.**

Outfall 001

With the exception of the WET tests, all 24-hr composite sample types have been changed to composite to allow the permittee flexibility in how the required samples are obtained. The sample frequencies for BOD5, TSS, and DO have been reduced to once per week since no permit violations were reported in the last three years. The FCB sample frequency has been reduced to once per month since no permit violations were reported during the past three years. The pH sampling frequency is already at the minimum level in the recommended Monitoring Frequencies for Non-Municipal permits. Therefore, it will not be reduced. The sample frequency for all parameters contained in 40 CFR Part 414, Subpart I will remain at once per quarter.

The sample types and monitoring frequencies are the same for both tiers of limits.

Outfall 002

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

Requirements for sampling frequency were based on recommended frequencies for self-monitoring of discharges with flows less than 1.0 MGD and the judgement of the permit writer. The pond associated with Outfall 002 is 7.5 MGD. Discharges will consist mainly of stormwater and boiler blowdown. Since these effluent streams are not process wastewater and discharges are not expected to occur on a contiuous basis, twice per month monitoring is considered sufficient to characterize the effluent as well as protect the water quality of the receiving stream.

The sample type for flow is “calculated” based on how the discharges occur. When the permittee needs to lower the volume of the pond, a valve is opened. The permittee will calculate the volume of the discharge by using the beginning and ending levels of the pond.

The sample types for COD, TSS, and pH are those which are normally required for discharges from a sedimentation pond. The O & G sample type is based on 40 CFR 122.21(g)(7).

A copy of the performance based monitoring frequency reduction worksheet may be found using the following link:

http://www.adeq.state.ar.us/ftproot/Pub/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0037770_Performance%20Based%20Monitoring%20Frequency%20Reduction_20140228.pdf

Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Flow	Five/week	Instantaneous	Five/week	Instantaneous
BOD5	Three/week	24-hr Composite	Once/week	Composite
TSS	Three/week	24-hr Composite	Once/week	Composite
DO	Three/week	Grab	Once/week	Grab
Acenaphthene	Once/quarter	24-hr Composite	Once/quarter	Composite
Acenaphthylene	Once/quarter	24-hr Composite	Once/quarter	Composite
Acrylonitrile	Once/quarter	24-hr Composite	Once/quarter	Composite
Anthracene	Once/quarter	24-hr Composite	Once/quarter	Composite
Benzene	Once/quarter	24-hr Composite	Once/quarter	Composite
Benzo(a)anthracene	Once/quarter	24-hr Composite	Once/quarter	Composite
3,4-Benzofluoranthene	Once/quarter	24-hr Composite	Once/quarter	Composite
Benzo(k)fluoranthene	Once/quarter	24-hr Composite	Once/quarter	Composite
Benzo(a)pyrene	Once/quarter	24-hr Composite	Once/quarter	Composite
Bis(2-ethylhexyl)phthalate	Once/quarter	24-hr Composite	Once/quarter	Composite
Carbon Tetrachloride	Once/quarter	24-hr Composite	Once/quarter	Composite
Chlorobenzene	Once/quarter	24-hr Composite	Once/quarter	Composite
Chloroethane	Once/quarter	24-hr Composite	Once/quarter	Composite
Chloroform	Once/quarter	24-hr Composite	Once/quarter	Composite
2-Chlorophenol	Once/quarter	24-hr Composite	Once/quarter	Composite
Chrysene	Once/quarter	24-hr Composite	Once/quarter	Composite
Di-n-butyl phthalate	Once/quarter	24-hr Composite	Once/quarter	Composite
1,2-Dichlorobenzene	Once/quarter	24-hr Composite	Once/quarter	Composite
1,3-Dichlorobenzene	Once/quarter	24-hr Composite	Once/quarter	Composite

Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
1,4-Dichlorobenzene	Once/quarter	24-hr Composite	Once/quarter	Composite
1,1-Dichloroethane	Once/quarter	24-hr Composite	Once/quarter	Composite
1,2-Dichloroethane	Once/quarter	24-hr Composite	Once/quarter	Composite
1,1-Dichloroethylene	Once/quarter	24-hr Composite	Once/quarter	Composite
1,2-trans-Dichloroethylene	Once/quarter	24-hr Composite	Once/quarter	Composite
2,4-Dichlorophenol	Once/quarter	24-hr Composite	Once/quarter	Composite
1,2-Dichloropropane	Once/quarter	24-hr Composite	Once/quarter	Composite
1,3-Dichloropropylene	Once/quarter	24-hr Composite	Once/quarter	Composite
Diethyl phthalate	Once/quarter	24-hr Composite	Once/quarter	Composite
2,4-Dimethylphenol	Once/quarter	24-hr Composite	Once/quarter	Composite
Dimethyl phthalate	Once/quarter	24-hr Composite	Once/quarter	Composite
4,6-Dinitro-o-cresol	Once/quarter	24-hr Composite	Once/quarter	Composite
2,4-Dinitrophenol	Once/quarter	24-hr Composite	Once/quarter	Composite
2,4-Dinitrotoluene	Once/quarter	24-hr Composite	Once/quarter	Composite
2,6-Dinitrotoluene	Once/quarter	24-hr Composite	Once/quarter	Composite
Ethylbenzene	Once/quarter	24-hr Composite	Once/quarter	Composite
Fluoranthene	Once/quarter	24-hr Composite	Once/quarter	Composite
Fluorene	Once/quarter	24-hr Composite	Once/quarter	Composite
Hexachlorobenzene	Once/quarter	24-hr Composite	Once/quarter	Composite
Hexachlorobutadiene	Once/quarter	24-hr Composite	Once/quarter	Composite
Hexachloroethane	Once/quarter	24-hr Composite	Once/quarter	Composite
Methyl Chloride	Once/quarter	24-hr Composite	Once/quarter	Composite
Methylene Chloride	Once/quarter	24-hr Composite	Once/quarter	Composite
Naphthalene	Once/quarter	24-hr Composite	Once/quarter	Composite
Nitrobenzene	Once/quarter	24-hr Composite	Once/quarter	Composite
2-Nitrophenol	Once/quarter	24-hr Composite	Once/quarter	Composite

Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
4-Nitrophenol	Once/quarter	24-hr Composite	Once/quarter	Composite
Phenanthrene	Once/quarter	24-hr Composite	Once/quarter	Composite
Phenol	Once/quarter	24-hr Composite	Once/quarter	Composite
Pyrene	Once/quarter	24-hr Composite	Once/quarter	Composite
Tetrachloroethylene	Once/quarter	24-hr Composite	Once/quarter	Composite
Toluene	Once/quarter	24-hr Composite	Once/quarter	Composite
Total Chromium	Once/quarter	24-hr Composite	Once/quarter	Composite
Total Copper	Once/quarter	24-hr Composite	Once/quarter	Composite
Total Lead	Once/quarter	24-hr Composite	Once/quarter	Composite
Total Nickel	Once/quarter	24-hr Composite	Once/quarter	Composite
Total Zinc	Once/quarter	24-hr Composite	Once/quarter	Composite
1,2,4-Trichlorobenzene	Once/quarter	24-hr Composite	Once/quarter	Composite
1,1,1-Trichloroethane	Once/quarter	24-hr Composite	Once/quarter	Composite
1,1,2-Trichloroethane	Once/quarter	24-hr Composite	Once/quarter	Composite
Trichloroethylene	Once/quarter	24-hr Composite	Once/quarter	Composite
Vinyl Chloride	Once/quarter	24-hr Composite	Once/quarter	Composite
FCB	Twice/month	Grab	Once/month	Grab
pH	Once/month	Grab	Once/month	Grab
Acute WET Testing	Once/quarter	24-hr Composite	Once/quarter	24-hr Composite
OUTFALL 002				
Flow	N/A	N/A	five/week	calculated
COD	N/A	N/A	twice/month	grab
TSS	N/A	N/A	twice/month	grab
O & G	N/A	N/A	twice/month	grab
pH	N/A	N/A	twice/month	grab

15. **PERMIT COMPLIANCE SCHEDULE.**

The permittee is required by Part II, Condition No. 11 of the permit to develop Standard Operating Procedures (SOP) and a checklist that outline the verification process to be implemented when "stormwater with low levels of contaminants" (as defined in Part II, Condition No. 14 of the permit) is routed to the pond associated with Outfall 002. The schedule of compliance has been included in the permit to allow the permittee 30 days to develop the SOP and checklist and submit it to the Department for review and approval.

16. **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.

17. **SOURCES.**

The following sources were used to draft the permit:

A. Application No. AR0037770 received 7/15/2013 with all additional information received by 12/1/2014.
B. Arkansas Water Quality Management Plan (WQMP).
C. APCEC Regulation No. 2.
D. APCEC Regulation No. 3.
E. APCEC Regulation No. 6 which incorporates by reference certain federal regulations included in Title 40 of the Code of Federal Regulations at Reg. 6.104.
F. 40 CFR Parts 122, 125, and 414.
G. Discharge permit file AR0037770.
H. Discharge Monitoring Reports (DMRs).
I. "2008 Integrated Water Quality Monitoring and Assessment Report", ADEQ.
J. "2008 List of Impaired Waterbodies (303(d) List)", ADEQ, February 2008.
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 5/23/2012.
O. Telephone conversation on 02/28/2014 to discuss changes to the permit.
P. Settlement Agreement between the permittee and EPA dated 12/11/2007.
Q. File Review from Jackie Trotta to Loretta Reiber, P.E. dated
R. PPS Calculations dated 7/14/2014.
S. Permit Rating Sheet dated 2/28/2014.
T. Performance Based Reduction Worksheet dated 2/28/2014.
U. EPA Comments on Preliminary Draft Permit dated 7/2/2014.
V. Letter from Kelly Nelson of BASF to Loretta Reiber, P.E. dated 7/17/2014.

W. Modeling report dated 10/23/2014.

18. **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.

19. **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: AR0037770
AFIN: 18-00081

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.),

BASF Corporation

is authorized to discharge treated sanitary wastewater, process wastewater, cooling tower blowdown, boiler blowdown, and contaminated stormwater from a facility located as follows: 100 Bridgeport Road, West Memphis, AR 72301-6413, take I-55 South from I-40, take Exit 1, turn left (south) onto Bridgeport Road, and drive straight to the facility in Crittenden County, Arkansas. The applicant's mailing address is: 100 Bridgeport Road, West Memphis, AR 72301.

Latitude: 35° 06' 00.00"; Longitude: 90° 05' 55.00"

to receiving waters (for both outfalls) named:

Mississippi River in Segment 6C of the Mississippi River Basin.

The outfalls are located at the following coordinates:

Outfall 001: Latitude: 35° 07' 48.01"; Longitude: 90° 07' 02.57"
Outfall 002: Latitude: 35° 07' 45"; Longitude: 90° 06' 05"

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

Effective Date:
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 - process wastewater (including cooling tower blowdown, boiler blowdown, contaminated stormwater, and stormwater with low levels of contaminants) and treated sanitary wastewater.

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:

TIER I – These limits are in effect until the permittee certifies that the changes listed in Part II, Condition No. 10 have taken place.

Effluent Characteristics	Discharge Limitations				Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
Flow	N/A	N/A	Report MGD	Report MGD	five/week	instantaneous
Biochemical Oxygen Demand (BOD5)	34.15	91.07	Report	Report	once/week	composite
Total Suspended Solids (TSS)	43.26	138.89	Report	Report	once/week	composite
Dissolved Oxygen (DO)	N/A	N/A	2.0 (Monthly Avg. Min.)		once/week	grab
Acenaphthene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Acenaphthylene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Acrylonitrile	0.07	0.18	Report µg/l	Report µg/l	once/quarter	composite
Anthracene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Benzene	0.03	0.10	Report µg/l	Report µg/l	once/quarter	composite
Benzo(a)anthracene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
3,4-Benzofluoranthene	0.02	0.05	Report µg/l	Report µg/l	once/quarter	composite
Benzo(k)fluoranthene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Benzo(a)pyrene	0.02	0.05	Report µg/l	Report µg/l	once/quarter	composite
Bis(2-ethylhexyl)phthalate	0.08	0.21	Report µg/l	Report µg/l	once/quarter	composite
Carbon Tetrachloride	0.01	0.03	Report µg/l	Report µg/l	once/quarter	composite
Chlorobenzene	0.01	0.02	Report µg/l	Report µg/l	once/quarter	composite
Chloroethane	0.08	0.20	Report µg/l	Report µg/l	once/quarter	composite
Chloroform	0.02	0.03	Report µg/l	Report µg/l	once/quarter	composite
2-Chlorophenol	0.02	0.07	Report µg/l	Report µg/l	once/quarter	composite
Chrysene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Di-n-butyl phthalate	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
1,2-Dichlorobenzene	0.06	0.12	Report µg/l	Report µg/l	once/quarter	composite
1,3-Dichlorobenzene	0.02	0.03	Report µg/l	Report µg/l	once/quarter	composite
1,4-Dichlorobenzene	0.01	0.02	Report µg/l	Report µg/l	once/quarter	composite
1,1-Dichloroethane	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
1,2-Dichloroethane	0.05	0.16	Report µg/l	Report µg/l	once/quarter	composite
1,1-Dichloroethylene	0.01	0.02	Report µg/l	Report µg/l	once/quarter	composite
1,2-trans-Dichloroethylene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite

Effluent Characteristics	Discharge Limitations				Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
2,4-Dichlorophenol	0.03	0.09	Report µg/l	Report µg/l	once/quarter	composite
1,2-Dichloropropane	0.12	0.17	Report µg/l	Report µg/l	once/quarter	composite
1,3-Dichloropropylene	0.02	0.03	Report µg/l	Report µg/l	once/quarter	composite
Diethyl phthalate	0.06	0.15	Report µg/l	Report µg/l	once/quarter	composite
2,4-Dimethylphenol	0.01	0.03	Report µg/l	Report µg/l	once/quarter	composite
Dimethyl phthalate	0.01	0.04	Report µg/l	Report µg/l	once/quarter	composite
4,6-Dinitro-o-cresol	0.06	0.21	Report µg/l	Report µg/l	once/quarter	composite
2,4-Dinitrophenol	0.05	0.09	Report µg/l	Report µg/l	once/quarter	composite
2,4-Dinitrotoluene	0.09	0.22	Report µg/l	Report µg/l	once/quarter	composite
2,6-Dinitrotoluene	0.19	0.49	Report µg/l	Report µg/l	once/quarter	composite
Ethylbenzene	0.02	0.08	Report µg/l	Report µg/l	once/quarter	composite
Fluoranthene	0.02	0.05	Report µg/l	Report µg/l	once/quarter	composite
Fluorene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Hexachlorobenzene	0.01	0.02	Report µg/l	Report µg/l	once/quarter	composite
Hexachlorobutadiene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Hexachloroethane	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Methyl Chloride	0.07	0.14	Report µg/l	Report µg/l	once/quarter	composite
Methylene Chloride	0.03	0.07	Report µg/l	Report µg/l	once/quarter	composite
Naphthalene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Nitrobenzene	0.02	0.05	Report µg/l	Report µg/l	once/quarter	composite
2-Nitrophenol	0.03	0.05	Report µg/l	Report µg/l	once/quarter	composite
4-Nitrophenol	0.05	0.09	Report µg/l	Report µg/l	once/quarter	composite
Phenanthrene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Phenol	0.01	0.02	Report µg/l	Report µg/l	once/quarter	composite
Pyrene	0.02	0.05	Report µg/l	Report µg/l	once/quarter	composite
Tetrachloroethylene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Toluene	0.02	0.06	Report µg/l	Report µg/l	once/quarter	composite
Total Chromium[3]	0.84	2.10	Report µg/l	Report µg/l	once/quarter	composite
Total Copper[3]	1.10	2.57	Report µg/l	Report µg/l	once/quarter	composite
Total Lead[3]	0.24	0.52	Report µg/l	Report µg/l	once/quarter	composite
Total Nickel[3]	1.28	3.02	Report µg/l	Report µg/l	once/quarter	composite
Total Zinc[3]	0.80	1.98	Report µg/l	Report µg/l	once/quarter	composite
1,2,4-Trichlorobenzene	0.05	0.11	Report µg/l	Report µg/l	once/quarter	composite
1,1,1-Trichloroethane	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
1,1,2-Trichloroethane	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Trichloroethylene	0.02	0.04	Report µg/l	Report µg/l	once/quarter	composite
Vinyl Chloride	0.08	0.20	Report µg/l	Report µg/l	once/quarter	composite
Fecal Coliform Bacteria (FCB)			(colonies/100ml)			
(April – September)	N/A	N/A	200	400	once/month	grab
(October – March)	N/A	N/A	1000	2000	once/month	grab
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/month	grab

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Effluent Characteristics	Discharge Limitations				Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
Acute WET Testing[2]	N/A	N/A	N/A	N/A	once/quarter	24-hr composite
Pimephales promelas (Acute)[2]			48-hr Minimum			
Pass/Fail Lethality (48-Hr NOEC) **TEM6C**			Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (48-Hr NOEC) **TOM6C**			Report %		once/quarter	24-hr composite
Coefficient of Variation (48-Hr NOEC) **TQM6C**			Report %		once/quarter	24-hr composite
Daphnia pulex (Acute)[2]			48-hr Minimum			
Pass/Fail Lethality (48-Hr NOEC) **TEM3D**			Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (48-Hr NOEC) **TOM3D**			Report %		once/quarter	24-hr composite
Coefficient of Variation (48-Hr NOEC) **TQM3D**			Report %		once/quarter	24-hr composite

1 The permittee is not required to send the cooling tower blowdown or the boiler blowdown through the process wastewater treatment system.
2 See Condition No. 8 of Part II (WET Testing Requirements).
3 See Condition No. 5 of Part II (Metals Requirements).

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).

Samples taken in compliance with the monitoring requirements specified above shall be taken after all wastewaters allowed to be discharged through this outfall have commingled and in the area of the following monitoring coordinates Latitude: 35° 07’ 46.48”; Longitude: 90° 06’ 03.74”. The effluent discharged through Outfall 001 must be sampled prior to entering the receiving stream.

PART I
PERMIT REQUIREMENTS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - process wastewater (including cooling tower blowdown, boiler blowdown, contaminated stormwater, and stormwater with low levels of contaminants) and treated sanitary wastewater.

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:

TIER II – These limits will become effective when the permittee certifies that the changes listed in Part II, Condition No. 10 have taken place.

Effluent Characteristics	Discharge Limitations				Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
Flow	N/A	N/A	Report MGD	Report MGD	five/week	instantaneous
Biochemical Oxygen Demand (BOD5)	82.57	220.18	Report	Report	once/week	composite
Total Suspended Solids (TSS)	104.58	335.77	Report	Report	once/week	composite
Dissolved Oxygen (DO)	N/A	N/A	2.0 (Monthly Avg. Min.)		once/week	grab
Acenaphthene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
Acenaphthylene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
Acrylonitrile	0.18	0.44	Report µg/l	Report µg/l	once/quarter	composite
Anthracene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
Benzene	0.07	0.25	Report µg/l	Report µg/l	once/quarter	composite
Benzo(a)anthracene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
3,4-Benzofluoranthene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
Benzo(k)fluoranthene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
Benzo(a)pyrene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
Bis(2-ethylhexyl)phthalate	0.19	0.51	Report µg/l	Report µg/l	once/quarter	composite
Carbon Tetrachloride	0.03	0.07	Report µg/l	Report µg/l	once/quarter	composite
Chlorobenzene	0.03	0.05	Report µg/l	Report µg/l	once/quarter	composite
Chloroethane	0.19	0.49	Report µg/l	Report µg/l	once/quarter	composite
Chloroform	0.04	0.08	Report µg/l	Report µg/l	once/quarter	composite
2-Chlorophenol	0.06	0.18	Report µg/l	Report µg/l	once/quarter	composite
Chrysene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
Di-n-butyl phthalate	0.05	0.10	Report µg/l	Report µg/l	once/quarter	composite
1,2-Dichlorobenzene	0.14	0.30	Report µg/l	Report µg/l	once/quarter	composite
1,3-Dichlorobenzene	0.06	0.08	Report µg/l	Report µg/l	once/quarter	composite
1,4-Dichlorobenzene	0.03	0.05	Report µg/l	Report µg/l	once/quarter	composite
1,1-Dichloroethane	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
1,2-Dichloroethane	0.12	0.39	Report µg/l	Report µg/l	once/quarter	composite
1,1-Dichloroethylene	0.03	0.05	Report µg/l	Report µg/l	once/quarter	composite
1,2-trans-Dichloroethylene	0.04	0.10	Report µg/l	Report µg/l	once/quarter	composite
2,4-Dichlorophenol	0.07	0.21	Report µg/l	Report µg/l	once/quarter	composite

Effluent Characteristics	Discharge Limitations				Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
1,2-Dichloropropane	0.28	0.42	Report µg/l	Report µg/l	once/quarter	composite
1,3-Dichloropropylene	0.05	0.08	Report µg/l	Report µg/l	once/quarter	composite
Diethyl phthalate	0.15	0.37	Report µg/l	Report µg/l	once/quarter	composite
2,4-Dimethylphenol	0.03	0.07	Report µg/l	Report µg/l	once/quarter	composite
Dimethyl phthalate	0.03	0.09	Report µg/l	Report µg/l	once/quarter	composite
4,6-Dinitro-o-cresol	0.14	0.51	Report µg/l	Report µg/l	once/quarter	composite
2,4-Dinitrophenol	0.13	0.23	Report µg/l	Report µg/l	once/quarter	composite
2,4-Dinitrotoluene	0.21	0.52	Report µg/l	Report µg/l	once/quarter	composite
2,6-Dinitrotoluene	0.47	1.18	Report µg/l	Report µg/l	once/quarter	composite
Ethylbenzene	0.06	0.20	Report µg/l	Report µg/l	once/quarter	composite
Fluoranthene	0.05	0.12	Report µg/l	Report µg/l	once/quarter	composite
Fluorene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
Hexachlorobenzene	0.03	0.05	Report µg/l	Report µg/l	once/quarter	composite
Hexachlorobutadiene	0.04	0.09	Report µg/l	Report µg/l	once/quarter	composite
Hexachloroethane	0.04	0.10	Report µg/l	Report µg/l	once/quarter	composite
Methyl Chloride	0.16	0.35	Report µg/l	Report µg/l	once/quarter	composite
Methylene Chloride	0.07	0.16	Report µg/l	Report µg/l	once/quarter	composite
Naphthalene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
Nitrobenzene	0.05	0.12	Report µg/l	Report µg/l	once/quarter	composite
2-Nitrophenol	0.08	0.13	Report µg/l	Report µg/l	once/quarter	composite
4-Nitrophenol	0.13	0.23	Report µg/l	Report µg/l	once/quarter	composite
Phenanthrene	0.04	0.11	Report µg/l	Report µg/l	once/quarter	composite
Phenol	0.03	0.05	Report µg/l	Report µg/l	once/quarter	composite
Pyrene	0.05	0.12	Report µg/l	Report µg/l	once/quarter	composite
Tetrachloroethylene	0.04	0.10	Report µg/l	Report µg/l	once/quarter	composite
Toluene	0.05	0.15	Report µg/l	Report µg/l	once/quarter	composite
Total Chromium[3]	2.04	5.08	Report µg/l	Report µg/l	once/quarter	composite
Total Copper[3]	2.66	6.20	Report µg/l	Report µg/l	once/quarter	composite
Total Lead[3]	0.59	1.27	Report µg/l	Report µg/l	once/quarter	composite
Total Nickel[3]	3.10	7.30	Report µg/l	Report µg/l	once/quarter	composite
Total Zinc[3]	1.93	4.79	Report µg/l	Report µg/l	once/quarter	composite
1,2,4-Trichlorobenzene	0.12	0.26	Report µg/l	Report µg/l	once/quarter	composite
1,1,1-Trichloroethane	0.04	0.10	Report µg/l	Report µg/l	once/quarter	composite
1,1,2-Trichloroethane	0.04	0.10	Report µg/l	Report µg/l	once/quarter	composite
Trichloroethylene	0.04	0.10	Report µg/l	Report µg/l	once/quarter	composite
Vinyl Chloride	0.19	0.49	Report µg/l	Report µg/l	once/quarter	composite
Fecal Coliform Bacteria (FCB)			(colonies/100ml)			
(April – September)	N/A	N/A	200	400	once/month	grab
(October – March)	N/A	N/A	1000	2000	once/month	grab
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/month	grab
Acute WET Testing[2]	N/A	N/A	N/A	N/A	once/quarter	24-hr composite

Effluent Characteristics	Discharge Limitations				Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
Pimephales promelas (Acute)[2]			48-hr Minimum			
Pass/Fail Lethality (48-Hr NOEC) **TEM6C**			Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (48-Hr NOEC) **TOM6C**			Report %		once/quarter	24-hr composite
Coefficient of Variation (48-Hr NOEC) **TQM6C**			Report %		once/quarter	24-hr composite
Daphnia pulex (Acute)[2]			48-hr Minimum			
Pass/Fail Lethality (48-Hr NOEC) **TEM3D**			Report (Pass=0/Fail=1)		once/quarter	24-hr composite
Survival (48-Hr NOEC) **TOM3D**			Report %		once/quarter	24-hr composite
Coefficient of Variation (48-Hr NOEC) **TQM3D**			Report %		once/quarter	24-hr composite

1 The permittee is not required to send the cooling tower blowdown or the boiler blowdown through the process wastewater treatment system.
2 See Condition No. 8 of Part II (WET Testing Requirements).
3 See Condition No. 5 of Part II (Metals Requirements).

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).

Samples taken in compliance with the monitoring requirements specified above shall be taken after all wastewaters allowed to be discharged through this outfall have commingled and in the area of the following monitoring coordinates: Latitude: 35° 07’ 46.48”; Longitude: 90° 06’ 03.74”. The effluent discharged through Outfall 001 must be sampled prior to entering the receiving stream.

PART I
PERMIT REQUIREMENTS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 002 – stormwater with low levels of contaminants[2], cooling tower blowdown, boiler blowdown, and treated groundwater well filter backwash.

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfall 002. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	**Discharge Limitations**				**Monitoring Requirements**	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
Flow	N/A	N/A	Report MGD	Report MGD	five/week	calculated[1]
Chemical Oxygen Demand (COD)	Report	Report	Report	Report	twice/month	instantaneous
Total Suspended Solids (TSS)	Report	Report	Report	Report	twice/month	instantaneous
Oil and Grease (O & G)	Report	Report	10	15	twice/month	instantaneous
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	twice/month	grab

1 The permittee must calculate the volume of water discharged in one day using the beginning and the ending water levels in the pond. This will require the permittee to note the levels of the pond five days per week.
2 See Condition No. 11 of Part II.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken after the effluent has been discharged from the pond and prior to entering the receiving stream.

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SECTION B. PERMIT COMPLIANCE SCHEDULE

Within 30 days of the effective date of the permit, the permittee must submit the checklist and Standard Operating Procedures (SOP) required by Part II, Condition No. 11 of this permit. The SOP and checklist must detail the verification process which will be taken to determine if the stormwater meets the definition of "stormwater with low levels of contaminants" set forth in Part II, Condtion No. 14 of this permit.

All reports required by this compliance schedule shall be submitted to the Department within the time period specified in Part III.D.5 of the permit (no later than 14 days following each compliance schedule due date listed in above table). Reports must be submitted to the following address:

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

PART II
OTHER CONDITIONS

1. The operator of this wastewater treatment facility shall hold an Advanced Industrial license from the State of Arkansas in accordance with Act 1103 of 1991, Act 556 of 1993, Act 211 of 1971, and Regulation No. 3, as amended.

2. 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.

3. 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. 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.

4. Any time the permittee proposes to begin production of a new product that may result in any addition of wastewater(s) to the permitted discharge and would trigger the notification requirements of 40 CFR 122.4(a), the permittee shall submit the following information to ADEQ:

   a. Process description including a summary of the wastewater(s) generated;
   b. Proposed method for disposal of any process wastewater(s) generated; and
   c. A qualitative list of toxic pollutants that may be present in any additional wastewater(s) resulting from the new process. (See Appendix D, Table II of 40 CFR 122 for the list of toxic pollutants.)

   If ADEQ determines that any of the above information will result in substantial alterations or variations in the permitted discharges, ADEQ may modify the permit under the provisions of 40 CFR 122.62. The modification will incorporate any conditions necessary to adequately ensure that the wastewater(s) is (are) properly treated and consistent with any applicable regulations including state water quality standards.

5. 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:

Parameter	MQL, µg/l
Acenaphthene	10
Acenaphthylene	10
Acrylonitrile	20
Anthracene	10
Benzene	10
Benzo(a)anthracene	5
3,4-Benzofluoranthene	10
Benzo(k)fluoranthene	5
Benzo(a)pyrene	5
Bis(2-ethylhexyl)phthalate	10
Carbon Tetrachloride	2
Chlorobenzene	10
Chloroethane	50
Chloroform	10
2-Chlorophenol	10
Chrysene	5
Di-n-butyl phthalate	10
1,2-Dichlorobenzene	10
1,3-Dichlorobenzene	10
1,4-Dichlorobenzene	10
1,1-Dichloroethane	10

Parameter	MQL, µg/l
1,2-Dichloroethane	10
1,1-Dichloroethylene	10
1,2-trans-Dichloroethylene	10
2,4-Dichlorophenol	10
1,2-Dichloropropane	10
1,3-Dichloropropylene	10
Diethyl phthalate	10
2,4-Dimethylphenol	10
Dimethyl phthalate	10
4,6-Dinitro-o-cresol	50
2,4-Dinitrophenol	50
2,4-Dinitrotoluene	10
2,6-Dinitrotoluene	10
Ethylbenzene	10
Fluoranthene	10
Fluorene	10
Hexachlorobenzene	5
Hexachlorobutadiene	10
Hexachloroethane	20
Methyl Chloride	50
Methylene Chloride	20
Naphthalene	10
Nitrobenzene	10
2-Nitrophenol	20
4-Nitrophenol	50
Phenanthrene	10
Phenol	10
Pyrene	10
Tetrachloroethylene	10
Toluene	10
Total Chromium	10
Total Copper	0.5
Total Lead	0.5
Total Nickel	0.5
Total Zinc	20
1,2,4-Trichlorobenzene	10
1,1,1-Trichloroethane	10
1,1,2-Trichloroethane	10
Trichloroethylene	10
Vinyl Chloride	10

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

MQL = 3.3 X MDL

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

6. Best Management Practices (BMPs), as defined in Part IV.6, must be implemented for the facility to prevent or reduce the pollution of waters of the State from stormwater runoff, spills or leaks, and/or waste disposal. The permittee must amend the BMPs whenever there is a change in the facility or a change in the operation of the facility.

7. Parameter Benchmark Values

Parameter	Benchmark Value, mg/l
Chemical Oxygen Demand (COD)	120
Total Suspended Solids (TSS)	100

If the monitoring results from Part IA exceed the parameter benchmark value for any of the effluent characteristics listed above, the facility shall investigate the cause and/or source of the elevated pollutant levels, review the BMPs, and determine and document a corrective action plan to address the benchmark exceedance. The facility shall commence with the above process within 30 calendar days of the exceedance. Note: An exceedance of a benchmark parameter does not constitute a violation of a permit limit.

The Corrective Action Plan must contain the following: the results of the review; the corrective actions the permittee will take to address the benchmark excursion, including whether modification or addition of BMPs is necessary; and an implementation schedule including alternative methods for implementing existing site controls or methods for implementing additional effective site controls, if the site controls have not already been implemented.

The permittee must document the date that corrective actions are initiated and are completed or expected to be completed. A copy should be retained onsite with the BMP documents.

8. WHOLE EFFLUENT TOXICITY TESTING (48-HOUR ACUTE 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 (%):	Tier I – 0.005%
	Tier II – 0.012%
EFFLUENT DILUTION SERIES (%):	Tier I – 0.002%, 0.003%, 0.004%, 0.005%, and 0.007%
	Tier II – 0.0051%, 0.0068%, 0.009%, 0.012%, and 0.016%
TESTING FREQUENCY:	once/quarter
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

Daphnia pulex acute static renewal 48-hour definitive toxicity test using EPA-821-R-02-012, or the latest 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.

Pimephales promelas (Fathead minnow) acute static renewal 48-hour definitive toxicity test using EPA-821-R-02-012, or the latest 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 defined as the greatest effluent dilution at and below which toxicity that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute 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.

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

2. PERSISTENT LETHALITY

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal effects at or below the critical dilution. Significant lethal effects are herein defined as a statistically significant difference at the 95% confidence level between the survival of the appropriate test organism in a specified effluent dilution and the control (0% effluent). The purpose of additional tests (also referred to as 'retests' or confirmation tests) is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation.

Such testing cannot confirm or disprove a previous test result.

If a frequency reduction, as specified in Item 6, has been granted and any subsequent valid test demonstrates significant lethal effects to a test species at or below the critical dilution, the frequency of testing for this species is automatically increased to once per quarter for the life of the permit.

a. Part I Testing Frequency Other Than Monthly

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

ii. If any of the additional tests demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section. The permittee shall notify ADEQ in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest. A TRE may be also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests.

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

b. Part I Testing Frequency of Monthly

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

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

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

i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.

ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: Daphnia pulex survival test; and Fathead minnow survival test.

iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for: Daphnia pulex survival test; and Fathead minnow survival test.

iv. 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 survival in the Daphnia pulex survival test or the survival endpoint 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.

v. 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%.

b. Statistical Interpretation

For the Daphnia pulex survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically 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-02-012 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 90% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

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

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

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

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

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

(B) the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);

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

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

d. Samples and Composites

i. The permittee shall collect two 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 shall collect a second composite sample for use during the 24-hour renewal of each dilution concentration for both tests. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 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.

iii. The permittee must collect both flow-weighted composite samples within the monitoring period. The second composite sample shall not be collected into the next monitoring period; such tests will be determined to be invalid. Monitoring period definitions are listed in Part IV.

iv. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on a regular or intermittent basis.

v. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. 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.

4. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA-821-R-02-012, 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.

b. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of WET test data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. The full report 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 report the following results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

i. Pimephales promelas (Fathead minnow)

(A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM6C.

(B) Report the NOEC value for survival, Parameter No. TOM6C.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.

ii. Daphnia pulex

(A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D

(B) Report the NOEC value for survival, Parameter No. TOM3D.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.

5. TOXICITY REDUCTION EVALUATION (TRE)

a. Within ninety (90) days of confirming lethality in the retests, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an

acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity. The TRE Action Plan shall lead to the successful elimination of effluent toxicity at the critical dilution and include the following:

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

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

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

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

   Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity. Where lethality was demonstrated within 24 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;

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

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

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

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

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

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

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

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

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

6. MONITORING FREQUENCY REDUCTION

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

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

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

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

9. Sludge from the activated sludge package plant and the process wastewater treatment system will be hauled off site as necessary. At this time, the sludge is sent to a Waste Management landfill.

10. Transition from Tier I Limits to Tier II Limits

    Beginning on the effective date of the permit, the permittee must submit Discharge Monitoring Reports (DMRs) for Tier I and Tier II as necessary. The DMR for Tier II can be marked and submitted as "No Discharge", until the permittee certifies that the filtration rates in the process wastewater treatment plant have increased or the planned production increases have occurred. The following items must be included in the certification:

    - A description of the steps taken to increase filtration rates in the process wastewater treatment plant;
    - A description of the work undertaken to increase production levels;

- Verification that all necessary permits for the work performed to increase filtration rates and production levels were obtained;
- The effect that the increased filtration rates and production levels have on the volume of wastewater discharged through Outfall 001; and
- Verification that the increased filtration rates and production levels have been sustained for a minimum of 90 days.

The permittee must continue to submit two (2) DMRs each monitoring period until this certification is received and approved by the Department. Once the use of Tier II has been approved by the Department, the permittee will no longer be required to submit DMRs for Tier I.

See Item #12.C.3 of the Fact Sheet for this NPDES Permit for information concerning this condition.

11. The permittee must develop Standard Operating Procedures (SOP) and a checklist that outline the verification process to be implemented when sending stormwater with low levels of contaminants (as defined in Condition No. 14 below) to the pond associated with Outfall 002.

12. The permittee may send stormwater with low levels of contaminants as defined in Condition No. 14 below provided the approved Standard Operating Procedures (SOP) and Checklist are followed. The facility must route all stormwater with low levels of contaminants through the treatment system associated with Outfall 001 prior to receiving the Department's approval of the SOP and checklist.

13. Verification that the SOP and the checklist procedures (required to be submitted to the Department in Part IB of this permit) were followed must be submitted with the monthly DMRs. If no stormwater was routed to the pond associated with Outfall 002, the permittee must submit a statement with the DMRs stating so.

14. For the purposes of this permit only, stormwater with low levels of contaminants is defined as the following:

    - Stormwater exceeding 0.5 inches in a 24-hour period;
    - No contaminates present in the sump area; and
    - Does not include the first 2500 gallons of stormwater removed from the sump area.

15. The permittee must maintain the SOP and the checklist required to be developed by Condition No. 11 above on site with the permit at all times. Any changes to the SOP or the checklist must be submitted to and approved by the Department prior to implementation.

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.

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 statues or regulations which defeats the regulatory purposes of the permit may subject the permittee to criminal enforcement pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.).

6. Oil and Hazardous Substance Liability

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

7. State Laws

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

8. Property Rights

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

9. Severability

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

10. Applicable Federal, State or Local Requirements

Permittees are responsible for compliance with all applicable terms and conditions of this permit. Receipt of this permit does not relieve any operator of the responsibility to comply with any other applicable federal 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.

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;

(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 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.

Once-through condenser cooling water flow monitored by pump logs, or pump hour meters as specified in Part I of this permit and based on the manufacturer's pump curves shall not be subject to this requirement.

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.

3. Monitoring Procedures

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

4. Penalties for Tampering

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

5. Reporting of Monitoring Results

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

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

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

6. Additional Monitoring by the Permittee

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

7. Retention of Records

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

8. Record Contents

Records and monitoring information shall include:

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

9. Inspection and Entry

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

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

SECTION D – REPORTING REQUIREMENTS

1. Planned Changes

The Permittee shall give notice 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.

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
B. That any activity has occurred or will occur which would result in any discharge on a non-routine or infrequent basis of a toxic pollutant which is not limited in the permit, if

that discharge will exceed the highest of the "notification levels" described in 40 CFR Part 122.42(a)(2).

9. Duty to Provide Information

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

10. Duty to Reapply

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

11. Signatory Requirements

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

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

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

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

sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

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

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

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

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

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

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

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

12. Availability of Reports

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

13. Penalties for Falsification of Reports

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

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.

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 flow measurement"** means the flow measured during the minimum time required for the flow-measuring device or method to produce a result in that instance. To the extent practical, instantaneous flow measurements coincide with the collection of any grab samples required for the same sampling period so that together the samples and flow are representative of the discharge during that sampling period.
19. **"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.
20. **"Instantaneous Minimum"** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
21. **"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.
22. **"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.
23. **"POTW"** means a Publicly Owned Treatment Works.
24. **"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.
25. **"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.

26. **"7-day average"** Also known as Average weekly. means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.
27. **"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.
28. **"Upset"** means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. Any upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless of improper operations.
29. **"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.
30. **"MGD"** shall mean million gallons per day.
31. **"mg/l "**shall mean milligrams per liter or parts per million (ppm).
32. **"µg/l"** shall mean micrograms per liter or parts per billion (ppb).
33. **"cfs"** shall mean cubic feet per second.
34. **"ppm"** shall mean parts per million.
35. **"s.u."** shall mean standard units.
36. **"Weekday"** means Monday – Friday.
37. **Monitoring and Reporting:**

    When a permit becomes effective, monitoring requirements are of the immediate period of the permit effective date. Where the monitoring requirement for an effluent characteristic is monthly or more frequently, the Discharge Monitoring Report (DMR) shall be submitted by the 25th of the month following the sampling. Where the monitoring requirement for an effluent characteristic is Quarterly, Semi-Annual, Annual, or Yearly, the DMR shall be submitted by the 25th of the month following the monitoring period end date.

    A. **MONTHLY:**

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

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

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

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

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