ADEQ

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

June 15, 2012

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (91 7199 9991 7030 4904 3464)

Charles E. Clark, Vice President
Martin Operating Partnership L.P.
484 East 6th Street
Smackover, AR 71762

RE: Discharge Permit Number AR0000591, AFIN 70-00039

Dear Mr. Clark:

Based upon the comments on the original draft permit and the ensuing changes, the Department has determined that the draft permit must be made available for public comments again. In accordance with 40 CFR 124.14(b)(2), only those portions of the permit which were changed or commented upon are open for comment at this time. Enclosed is 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 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.

The following is a list of the major changes to the previously issued permit. For a list of changes, please see Section 6 of the enclosed Fact Sheet.

1. Two sets of production based limits have been included.
2. The City of Smackover's lowest monthly average flow has been taken into account for water quality based limits not calculated through use of the MultiSMP model.
3. The sub-lethal *C. dubia* WET limits have been removed.
4. The flow monitoring frequency at Outfalls 002 and 003 has been reduced to once per month.

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,

Steven L. Drown

Steven L. Drown
Chief, Water Division

SD:lr

Enclosure

SECOND PUBLIC NOTICE OF DRAFT DISCHARGE PERMIT
AND 208 Plan
PERMIT NUMBER AR0000591, AFIN 70-00039

This is to give notice that the Permits Branch of the Water Division of the Arkansas Department of Environmental Quality (ADEQ), 5301 Northshore Drive, North Little Rock, Arkansas 72118-5317 at telephone number (501) 682-0622, proposes a draft renewal of the permit for which an application was received on 12/27/2010 for the following applicant under the National Pollutant Discharge Elimination System (NPDES) and the Arkansas Water and Air Pollution Control Act. The permit was originally sent to public notice on October 12, 2011. Due to comments received on that draft permit and the ensuing changes, the Department has determined that cause exists for sending this permit back to public notice. **UNDER 40 CFR 124.14(b)(2), ONLY THOSE PORTIONS OF THE FIRST DRAFT PERMIT WHICH HAVE BEEN MODIFIED OR WERE COMMENTED UPON IN THE FIRST PUBLIC NOTICE COMMENT PERIOD ARE OPEN FOR COMMENT AT THIS TIME.**

Applicant: Martin Operating Partnership L.P., 484 East 6th Street, Smackover, AR 71762. Location: Approximately 1/2 mile northeast of downtown Smackover at 484 East 6th Street; Latitude: 33° 21' 51.25"; Longitude: 92° 43' 03.65" in Union County, Arkansas. The discharge of treated process wastewater and contaminated stormwater at Outfall 001 is made into Smackover Creek, thence to the Ouachita River in Segment 2D of the Ouachita River Basin. The discharges of contaminated stormwater through Outfalls 002 and 003 are made into an unnamed tributary of Smackover Creek, thence to Smackover Creek, thence to the Ouachita River in Segment 2D of the Ouachita River Basin.

The 208 Plan, developed by the ADEQ under provisions of Section 208 of the federal Clean Water Act, is a comprehensive program to work toward achieving federal water goals in Arkansas. The initial 208 Plan, adopted in 1979, provides for annual updates, but can be revised more often if necessary. The 208 Plan has been revised to change the NH3-N limit for the months of May – October to 5.47 mg/l and to update the background flows to include the City of Smackover's lowest monthly average flows for the primary season and the critical season. The background flow for the months of May through October is a total of 0.453 cfs (7Q10 = 0.36 cfs, Smackover avg. flow = 0.093 cfs). The background flow for the months of November through April is a total of 4.782 cfs (7Q10 = 4.55 cfs, Smackover avg. flow = 0.232 cfs).

The following changes were made to the first draft permit:

1. Two sets of production based limits have been included.
2. The City of Smackover's lowest monthly average flows have been taken into account for water quality based limits not calculated through use of the MultiSMP model.
3. The sub-lethal *C. dubia* WET limits have been removed.
4. The flow monitoring frequency at Outfalls 002 and 003 has been reduced to once per month.
5. The Zinc requirements have been removed.
6. The coordinates for Outfall 002 have been updated as requested by the permittee.

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

The last day of the comment period is 30 days 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. The permit will become effective approximately two weeks after the close of the comment period unless comments are received and/or a public hearing is requested prior to the close of the comment period requiring a delay of the effective date. Comments and public hearing procedures may be found at 40 CFR Parts 124.10 through 124.12 and APCEC Regulation No. 8. 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. After the public comment period, and public hearing, if one is held, ADEQ will issue a final permitting decision. A Public Hearing will be held when ADEQ finds a significant degree of public interest. ADEQ will notify the applicant and each person who has submitted written comments or requested 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 (Administrative Procedures).

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 AR0000591 with Arkansas Department of Environmental Quality (ADEQ) Facility Identification Number (AFIN) 70-00039 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:

   Martin Operating Partnership L.P.
   484 East 6th Street
   Smackover, AR 71762

3. **PREPARED BY.**

   The permit was prepared by:

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

4. **PERMIT ACTIVITY.**

   Previous Permit Effective Date: 07/01/2006
   Previous Permit Expiration Date: 06/30/2011

   The permittee submitted a permit renewal application on 12/27/2010. 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).

   A draft permit was sent to public notice on 10/12/2011. The permittee submitted comments on November 10, 2011. Based on the comments and the ensuing changes, the permit is

required to go back to public notice. The comments and the Department's responses are as follows:

Comment: The permittee stated that Zinc should not be included in the permit at Outfall 001 since it was not detected during the PPS submitted with the permit application. At the very least, the permittee wants the requirement moved to the Permit Compliance Section (Part IB) of the permit with a monitoring frequency of once per quarter for a period of one year if reasonable potential is not demonstrated.

Response: Reach Nos. 006 and 007 of Smackover Creek are on the 303(d) list for Zinc in Category 5a due to unknown causes. Stream segments in Category 5a are those which are truly impaired but have not yet had a TMDL developed. The impairment classification was made based upon data taken at monitoring station OUA0027 which is located on Smackover Creek near the City of Smackover and upstream of the City of Smackover's WWTP. However, the last confirmed exceedance (i.e., no QA/QC concerns) of the water quality standard for Zinc occurred in May 2006. The Assessment Methodology used by the Water Division's Water Quality Planning Branch states that "In accordance with Reg. 2.508, metals toxicity will be evaluated based on instream hardness values at the time of sample collection. If the ambient hardness value is less than 25 mg/l, then a hardness value of 25 mg/l will be used to calculate metals toxicity. If more than one exceedance of the criterion occurs during the period of record, the water body will be listed as not attaining the standard." Therefore, the monitoring and reporting requirements for Zinc will be removed from the permit.

It is important to note that the 2004 Technical Support Document for Effluent Guidelines Program Plan does not list Zinc as a metal of concern in the effluent from a petroleum refinery. Also, the PPS submitted with the renewal application showed that Zinc was not present in detectable amounts. Therefore, the permittee has not demonstrated reasonable potential for violations of the water quality standard for Zinc.

Comment: The facility requested that the Department use a higher production level to calculate the permit limits which are based on the ELGs. The permittee stated that they were looking at increasing production in the next three to five years. The production could increase to 11,500 bbl/day with a maximum of 13,300 bbl/day possible.

Response: The Department cannot permit the facility for 11,500 bbl/day – 13,300 bbl/day as those levels exceed the current maximum production capabilities.

If production rates are expected to change significantly during the life of the permit, tiered limits are allowed under 40 CFR 122.45(b)(2)(ii)(A)(i). The ELGs take into account a range of normal variability. Generally, up to a 20% fluctuation in production is considered to be within the range of normal variability, while changes in production higher than 20% warrant consideration of tiered limits.

The Department will therefore include two tiers of effluent limits. The first tier will be based upon the current production capacity of 7,700 bbl/day. The permittee will be required to operate under the limits in this tier if the production level is 9,240 bbl/day or less, i.e., 20% above 7,700 bbl/day. The second tier will be based upon the expected future production capacity of 11,500 bbl/day. The permittee will be required to operate under this tier if the production is 9,241 bbl/day or higher, i.e., approximately 20% below 11,500 bbl/day.

The Department has added Condition No. 8 to the permit which states that the permittee must submit DMRs for both tiers even if they only operate under one tier during the monitoring period. If the permittee operates under both tiers in a given monitoring period, the permittee must conduct the required tests for both tiers, even if it means conducting more tests than would be required if they operated under only one tier.

Comment: The facility requested that the Department use the City of Smackover's flow when calculating the critical dilution and the dilution series since it was used in the MultiSMP model.

Response: The 7Q10 for Smackover Creek was based on a monitoring station located upstream of the outfall for the City of Smackover's wastewater treatment plant. Therefore, the flow from the City of Smackover's wastewater treatment plant is not already included in the 7Q10 flow. The design flow for the City of Smackover's WWTP was used as the first discharger in the MultiSMP model due to its proximity to the permittee's outfall. The MultiSMP model is a desk top model used to determine the appropriate limits based on maintaining the Dissolved Oxygen standard in the receiving stream under worst-case scenarios.

The Department will not use the design flow in calculating other water quality based limits since doing so would not be a representation of a worst-case scenario. The Department has determined that the lowest monthly average flow during the period of January 2006 through March 2011 for the City of Smackover was 0.093 cfs (September 2011) for the critical season of May – October and 0.232 cfs (November 2008) for the primary season of November – April. The lowest monthly average flows have been used for the background flow contributed by the City of Smackover since they most closely approximate the minimum flow from that facility. The Department will use those flows along with the 7Q10 to calculate the toxicity based NH3-N limits, the water quality based Hexavalent Chromium limits, critical dilution, and dilution series for the permittee. Those parameters are the only water quality based limits in the permit besides those determined by the MultiSMP model.

Comment: The permittee objected to the use of a background concentration in the NH3-N toxicity calculations because one is not normally used.

Response: The NH3-N background concentration was obtained from OUA0027, a monitoring station located on Smackover Creek. Background concentrations must be used when available in order to ensure that the discharge does not cause an exceedance of a water quality standard. This requirement is contained in Appendix D of the CPP.

Comment: The permittee objected to the inclusion of sub-lethal WET limits for *C. dubia.*

Response: The reasonable potential calculations were redone to separate the primary and the critical seasons since different critical dilutions apply during the two seasons. Reasonable potential for sub-lethal failures was not demonstrated when only the applicable season's critical dilution was used. Therefore, the sub-lethal WET limits for *C. dubia* will be removed from the permit.

Comment: The permittee objected to the inclusion of Zinc and TSS requirements at Outfalls 002 and 003. These outfalls do not discharge directly into Smackover Creek. If they have to remain in the permit, they want the requirements moved to the Permit Compliance Section (Part IB) of the permit with a monitoring frequency of once per year.

Response: Reach Nos. 006 and 007 of Smackover Creek are on the 303(d) list in Category 5a for Zinc due to unknown causes and TSS due to surface erosion. Stream segments in Category 5a are those which are truly impaired but have not yet had a TMDL developed.

The Department recognizes that neither outfall discharges directly into Smackover Creek. However, since these outfalls discharge only stormwater which is not retained or held prior to being discharged, the effluent is expected to reach Smackover Creek. Any effluent discharged by the permittee which reaches Smackover Creek will affect the levels of Zinc and TSS in that waterbody.

The Zinc monitoring and reporting requirement has been removed from the permit at Outfalls 002 and 003. Please see the response to the first comment for justification of the removal of this requirement.

TSS data is not available for either outfall. Data is necessary to determine the effect of the effluent on the TSS levels in Smackover Creek. The monitoring will remain at once per quarter. A monitoring frequency of once per year when no data currently exists will not provide sufficient data to accurately assess the impact of the effluent on Smackover Creek. The monitoring and reporting requirements will remain in Part IA of the permit due to the inclusion of TSS on the 2008 303(d) list.

Comment: The permittee objected to the increased flow monitoring frequency at Outfalls 002 and 003. Previous permit only required flow monitoring once per quarter. The draft permit required flow monitoring to be done once per week. Once per week is considered to be excessive because they have only had one permit violation during the term of the permit.

Response: The flow monitoring was set at once per week in the first draft permit based upon the recommended monitoring frequencies for non-municipal NPDES permits, not on the compliance history of the permittee at Outfalls 002 and 003. Flow is generally required to be monitored a minimum of twice per week. The Department will allow reduce the monitoring frequency to a minimum of once per month. This monitoring frequency is being allowed for this facility because storm events generally do not occur once per week and the stormwater is not retained prior to being discharged.

Comment: The permittee objected to the requirement for an operator with an Advanced Industrial license and stated that it was extreme. The permittee requested that they only be required to have an operator with a Class I [sic] Industrial license.

Response: Reg. 3.503(B) states that an Advanced Industrial WWTP consists of activated sludge, treatment of metal finishing waste streams, sedimentation/clarification with chemicals, dissolved air flotation, or similar advance wastewater treatment processes. The wastewater treatment plant associated with this facility includes a dissolved air flotation unit. As one of the components of the WWTP at this facility is specifically listed in Reg. 3.503(B) as an Advanced Industrial WWTP, the permit must contain the requirement for an Advanced Industrial operator.

Comment: The permittee stated that it was their understanding that the Department is using BMP requirements in lieu of numerical requirements for stormwater discharges. Stormwater discharges are regulated by the applicable ELGs. Therefore, if the numerical limits are being met, the appropriate BMPs are being implemented which therefore negates the need for BMP requirements in the permit. The permittee requested that the BMP language be removed from the permit.

Response: The Department agrees that stormwater discharges are regulated by the ELGs. However, the outfalls included in this permit contain parameters which are not regulated by the ELGs. BMPs are necessary to control the levels of those parameters in the effluent. Therefore, the language will remain in the permit.

Comment: In a letter dated May 9, 2012, the permittee requested permission to move Outfall 002 between 300 and 400 feet east in order to accommodate work in the tank farm area. The receiving stream is not changing.

Response: The Department has updated the coordinates for Outfall 002 as requested by the permittee.

THIS IS A REDRAFTED PERMIT. ONLY THOSE PORTIONS OF THE PERMIT WHICH HAVE BEEN CHANGED OR WERE COMMENTED UPON DURING THE FIRST COMMENT PERIOD ARE OPEN FOR COMMENT AT THIS TIME.

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 plan
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
USFWS - United States Fish and Wildlife Service
WET - Whole effluent toxicity
WQMP - water quality management plan
WQS - Water Quality standards
WWTP - wastewater treatment plant

DMR Review:

The Discharge Monitoring Reports (DMR's) for February 2008 through January 2011 were reviewed during the permit renewal process. At Outfall 001, an exceedance of the NH3-N limit was reported in September 2009 and exceedances of the O & G limits were reported in September 2009, January 2010, April 2010, and January 2011. At Outfall 002, exceedances of the TOC and the O & G limits were reported in April 2010. No exceedances at Outfalls 003 and 004 were reported during the specified time frame.

Legal Order Review:

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

5. FINANCIAL ASSURANCE

Financial assurance is not required to be submitted for this NPDES permit. The facility does not operate a domestic wastewater treatment plant.

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:

THIS IS A REDRAFTED PERMIT. ONLY THOSE PORTIONS OF THE PERMIT WHICH HAVE BEEN CHANGED OR WERE COMMENTED UPON DURING THE FIRST COMMENT PERIOD ARE OPEN FOR COMMENT AT THIS TIME.

1. Two tiers of production based limits have been included.
2. The City of Smackover's lowest monthly average flows have been taken into account for water quality based limits not calculated through use of the MultiSMP model.
3. The sub-lethal *C. dubia* WET limits have been removed.
4. The flow monitoring frequency at Outfalls 002 and 003 has been reduced to once per month.
5. The Zinc requirements have been removed.

6. The coordinates for Outfall 002 have been updated as requested by the permittee. It is important to note that the receiving stream is not changing.

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

The outfalls located at the following coordinates based on data obtained during the site visit and confirmed with Google Earth using WGS84:

Outfall 001: Latitude: 33° 22' 12.6" Longitude: 92° 42' 45.0"
Outfall 002: Latitude: 33° 21' 52.52" Longitude: 92° 42' 42.87"
Outfall 003: Latitude: 33° 21' 44.0" Longitude: 92° 42' 42.5"

The receiving waters named:

Outfall 001: Smackover Creek, thence to the Ouachita River in Segment 2D of the Ouachita River Basin.

The receiving streams with USGS Hydrologic Unit Code (H.U.C) of 08040201 and reach #006 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.

Outfalls 002 and 003: an unnamed tributary of Smackover Creek, thence into Smackover Creek, thence into the Ouachita River in Segment 2D of the Ouachita River Basin.

The receiving streams with USGS Hydrologic Unit Code (H.U.C) of 08040201 and reach #006 (of Smackover Creek) is a Water of the State classified for secondary contact recreation, raw water source for domestic (public and private), industrial, and agricultural water supplies, propagation of desirable species of fish and other aquatic life, and other compatible uses.

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

A. 303(d) List:

Smackover Creek is on the 2008 303(d) list for Zinc, DO, and Siltation in Category 5a due to unknown causes (Zinc and DO) and surface erosion (Siltation). The permit contains limits for DO and TSS at Outfall 001. The permit contains limits on oxygen demanding parameters such as CBOD5, COD, and NH3-N as well as a TSS limit at Outfall 001. These limits are protective of the water quality standards of the receiving stream. Therefore, no additional action will be taken regarding those listings.

The permittee conducted a Priority Pollutant Scan which was submitted with the permit application. Zinc was not detected in the effluent. The impairment classification for Zinc was made based upon data taken at monitoring station OUA0027 which is located on Smackover Creek near the City of Smackover and upstream of the City of Smackover's WWTP. However, the last confirmed exceedance (i.e., no QA/QC concerns) of the water quality standard for Zinc occurred in May 2006. The Assessment Methodology used by the Water Division's Water Quality Planning Branch states that "In accordance with Reg. 2.508, metals toxicity will be evaluated based on instream hardness values at the time of sample collection. If the ambient hardness value is less than 25 mg/l, then a hardness value of 25 mg/l will be used to calculate metals toxicity. If more than one exceedance of the criterion occurs during the period of record, the water body will be listed as not attaining the standard." Therefore, the monitoring and reporting requirements for Zinc will be removed from the permit at all three outfalls.

Outfalls 002 and 003 discharge only when a rain event has occurred. Limits on oxygen demanding parameters are difficult at best to calculate for outfalls where there is a discharge only during and immediately after a rain event. Therefore, no oxygen demanding parameters will be included at these outfalls.

The permittee will be required to monitor the TSS levels in the effluent once per quarter based on the category of the listing and the cause of the impairment.

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: 0.12 MGD (highest monthly average flow over the past two years)
Outfalls 002 and 003: variable

B. Type of Treatment:

Outfall 001: API separator, settling tank, dissolved air flotation, aeration tank, stabilization ponds, carbon adsorption, drying vats, and chemical oxidation

Outfalls 002 and 003: BMPs

C. Discharge Description:

Outfall 001: treated process wasterwater and contaminated stormwater runoff
Outfalls 002 and 003: contaminated stormwater runoff

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 95 is greater 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 2911 or North American Industry Classification System (NAICS) code of 324110, the applicant's activities are the operation of a petroleum refinery.

11. **SLUDGE PRACTICES.**

Sludge from this facility is sent off site in accordance with all applicable regulations.

12. **PERMIT CONDITIONS.**

The Arkansas Department of Environmental Quality has made a determination to issue a draft permit for the discharge described in the application. Permit requirements are based on federal regulations (40 CFR Parts 122, 124, and Subchapter N), the National Pretreatment Regulation in 40 CFR Part 403 and regulations promulgated pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et. seq.).

A. Tier I Effluent Limitations

Outfall 001 - treated process wasterwater and contaminated stormwater

Tier I Production – up to and including 9,240 bbl/day

1. Conventional and/or Toxic Pollutants

Effluent Characteristics	Discharge Limitations				Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
Flow	N/A	N/A	Report, MGD	Report, MGD	continuous	record
Carbonaceous Biochemical Oxygen Demand (CBOD5)						
(November – April)	30	45	30	45	two/week	composite
(May – October)	12	18	12	18	two/week	composite
Total Suspended Solids (TSS)	112.2	175.14	Report	Report	two/week	composite
Ammonia-Nitrogen (NH3-N)						
(November – April)	15	22.5	15	22.5	one/week	composite
(May – October)	6.26	15	6.26	15	one/week	composite
Dissolved Oxygen (DO)						
(November – April)	N/A	N/A	3.2, Inst. Min.		two/week	grab
(May – October)	N/A	N/A	4.0, Inst. Min.		two/week	grab
Oil and Grease (O & G)	42.03	79.94	10	15	two/week	grab
Chemical Oxygen Demand (COD)	925.41	1784.11	Report	Report	two/week	composite
Sulfides	0.71	1.57	Report	Report	one/week	composite
Phenolic Compounds	0.61	2.41	Report	Report	one/week	composite
Total Chromium	0.71	2.04	Report µg/l	Report µg/l	one/week	composite
Hexavalent Chromium, Dissolved						
(November – April)	0.0618	0.1369	131.99 µg/l	264.83 µg/l	two/month	composite
(May – October)	0.031	0.063	25.07 µg/l	50.31 µg/l	two/month	composite
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	one/week	grab
Chronic WET Testing	N/A	N/A	Report %		once/quarter	composite

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

B. **Tier II Effluent Limitations**

Outfall 001 - treated process wasterwater and contaminated stormwater

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

Tier II Production – 9,241 bbl/day and up

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	continuous	record
Carbonaceous Biochemical Oxygen Demand (CBOD5)						
(November – April)	30	45	30	45	two/week	composite
(May – October)	12	18	12	18	two/week	composite
Total Suspended Solids (TSS)	109.86	171.61	Report	Report	two/week	composite
Ammonia-Nitrogen (NH3-N)						
(November – April)	15	22.5	15	22.5	one/week	composite
(May – October)	6.26	15	6.26	15	one/week	composite
Dissolved Oxygen (DO)						
(November – April)	N/A	N/A	3.2, Inst. Min.		two/week	grab
(May – October)	N/A	N/A	4.0, Inst. Min.		two/week	grab
Oil and Grease (O & G)	61.78	117.46	10	15	two/week	grab
Chemical Oxygen Demand (COD)	1359.89	2620.17	Report	Report	two/week	composite
Sulfides	1.06	2.35	Report	Report	one/week	composite
Phenolic Compounds	0.89	3.56	Report	Report	one/week	composite
Total Chromium	1.04	2.97	Report µg/l	Report µg/l	one/week	composite
Hexavalent Chromium, Dissolved						
(November – April)	0.0888	0.1967	131.99 µg/l	264.83 µg/l	two/month	composite
(May – October)	0.031	0.063	25.07 µg/l	50.31 µg/l	two/month	composite
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	one/week	grab
Chronic WET Testing	Daily Average Min. Report %		7-day Min. Report %		once/quarter	composite

2. **Solids, Foam, and Free Oil:** There shall be no discharge of distinctly visible solids, scum, or foam of a persistent nature, nor shall there be any formation of slime, bottom

deposits, or sludge banks. There shall be no visible sheen due to the presence of oil (Sheen means an iridescent appearance on the surface of the water).

C. **Effluent Limitations**

Outfalls 002 and 003 – contaminated stormwater runoff

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

Effluent Characteristics	Discharge Limitations				Monitoring Requirements	
	Mass (lbs/day, unless otherwise specified)		Concentration (mg/l, unless otherwise specified)		Frequency	Sample Type
	Monthly Avg.	Daily Max	Monthly Avg.	Daily Max		
Flow	N/A	N/A	Report, MGD	Report, MGD	once/month	estimate
Total Organic Carbon (TOC)	N/A	N/A	N/A	110	once/quarter	grab
Oil and Grease (O & G)	N/A	N/A	N/A	15	once/quarter	grab
Total Suspended Solids (TSS)	N/A	N/A	N/A	Report	once/quarter	grab
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/quarter	grab

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

13. **BASIS FOR PERMIT CONDITIONS.**

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

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

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

A. **Limits Calculations**

1. Mass limits:

Outfall 001 – Water Quality

The water-quality based mass limits were calculated using the following formula and an average flow of 0.12 MGD:

Mass, lb/day = Concentration, mg/l * Q, MGD * 8.34

Outfalls 002 and 003

Mass limits were not calculated for Outfalls 002 and 003. The effluent volume is highly variable at these outfalls because they only discharge stormwater.

2. Daily Maximum Limits:

Outfall 001

The daily maximum water quality based limits are based on Section 5.4.2 of the Technical Support Document for Water Quality-Based Toxics Control.

Daily Maximum limits = Monthly average limits X 1.5

Outfalls 002 and 003

The daily maximum limits are based on the applicable portions of 40 CFR 419, Subpart D.

3. Applicable Effluent Limitations Guidelines

Discharges from facilities of this type are covered by Federal effluent limitations guidelines promulgated under 40 CFR Part 419, Subpart D – Petroleum Refining Point Source Category, Lube Subcategory.

Outfall 001

Process Wastewater Calculations

According to data submitted by the permittee, the highest annual production level during the past five years was 7,537 barrels per day. The refinery capacity is currently at a level of 7,700 barrels per day. The facility's size factor determined

using the refinery capacity and the table in 40 CFR 419.42(b)(1) is 0.71. This number will not change if the capacity is increased to 11,500 barrels per day.

In order to calculate the permit limits based on the Effluent Limitation Guidelines, the Process Configuration must first be calculated. Process capacity relative to refinery throughput is calculated for each process. The results in each process category are added together and multiplied by the appropriate weighting factor to obtain the process configuration for the process category. All process configurations are then totaled to obtain the facility's process configuration number. The total process configuration number and the chart in 40 CFR 419.42(b)(2) are used to determine the facility's process factor.

Process Factor at Production Level of 7,700 bbl/day

Process	Process Capacity, 1.000 bbl	Refinery Throughput, 1,000 bbl	Process Capacity Relative to Refinery Throughput	Weighting Factor	Process Configuration
Crude					
Atm. Distillation	7.7	7.7	1.00		
Vac. Distillation	3.3	7.7	0.43		
Desalting	7.7	7.7	1.00		
Total			2.43	1	2.43
Lube					
Hydrotreating	5.8	7.7	0.75		
Napthalenic	5.8	7.7	0.75		
Total			1.50	13	19.50
Asphalt					
Oxidation	1.1	7.7	0.14		
Production	1.1	7.7	0.14		
Total			0.28	12	3.36
				Total P.C.	25.29
				Process Factor	2.44

The process factor will remain the same for the second tier, i.e., production level of 11,500 bbl/day since the process capacity relative to refinery throughput will remain the same. It has been assumed that the process capacities will increase the same percentage as the increase in refinery capacity.

The effluent limitations based on the application of the best practicable control technology currently available (BPT) and best conventional pollutant control technology (BCT) are calculated by the following equation:

Limit = Size Factor * Process Factor * Feedstock Rate * ELG

Feedstock is defined in 40 CFR 419.11(d) as the crude oil and natural gas liquids which are fed to the topping unit. The feedstock rate is being set equal to the current capacity of the refinery for Tier I 7,700 bbl/day (7.7 1,000 bbl/day). The permittee is considering making modifications to the plant during the term of this permit which would increase the capacity to 11,500 bbl/day (11.5 1,000 bbl/day). Therefore, the Tier II limits will be based upon a feedstock rate of 11,500 bbl/day.

BPT Effluent Limitations, 40 CFR 419.42(a)

Parameter	ELGs lb/1,000 bbl		Limits for Production of 7,700 bbl/day, lb/day		Limits for Production of 11,500 bbl/day, lb/day	
	AML	DML	AML	DML	AML	DML
BOD5[1, 2]	9.1	17.9	121.39	238.78	181.3	356.61
TSS[1, 2]	8	12.5	106.72	166.74	159.38	249.03
COD[1, 3]	66	127	880.41	1694.11	1314.89	2530.17
O & G[1, 2]	3	5.7	40.02	76.04	59.77	113.56
Ammonia[1, 3]	3.8	8.3	50.69	110.72	75.71	165.36
Sulfide[1, 3]	0.053	0.118	0.71	1.57	1.06	2.35
Total Chromium[1, 4]	0.16	0.273	2.13	3.64	3.19	5.44
Hexavalent Chromium[1, 4]	0.011	0.024	0.15	0.32	0.22	0.48
Phenolic Compounds[1, 4]	0.065	0.133	0.87	1.77	1.29	2.65

1. BPT – 40 CFR 419.42(a)
2. BCT – 40 CFR 419.44(a)
3. BAT – 40 CFR 419.43(a)
4. See table below for calculation of BAT limits.

BAT Effluent Limitations– 40 CFR 419.43(c)(1).

40 CFR 419.43 requires the use of the process feedstock rate rather than the feedstock rate for the facility. Since the process feedstock rates are different for each process, the limits were calculated for each of the three processes then added together to determine the permit limit. The Tier I limits were calculated using the process capacities. The process capacities for Tier II were assumed to be increasing by the same percentage as the increase in the facility production capacity. The process feedstock rates are listed in

the first table below this paragraph. The BAT limits are calculated in the second table below.

Limit = Size Factor * Process Factor * Process Feedstock Rate * ELG

Parameter	Tier I Process Feedstock Rate, 1,000 bbl/day	Tier I Process Feedstock Rate, 1,000 bbl/day
crude	7.7	11.5
lube	5.8	8.66
asphalt	1.1	1.64

Parameter	ELGs lb/1,000 bbl		Limits for Production Level of 7,700 bbl/day, lb/day		Limits for Production Level of 11,500 bbl/day, lb/day	
	AML	DML	AML	DML	AML	DML
Total Chromium						
crude	0.004	0.011	0.0308	0.0847	0.046	0.1265
lube	0.104	0.299	0.6032	1.7342	0.9006	2.5893
asphalt	0.022	0.064	0.0242	0.0704	0.0363	0.1056
Total			0.6582	1.8893	0.9829	2.8214
Hexavalent Chromium						
crude	0.0003	0.0007	0.0023	0.0054	0.0035	0.0081
lube	0.0087	0.0192	0.0505	0.1114	0.0753	0.1663
asphalt	0.0019	0.0041	0.0021	0.0045	0.0031	0.0068
Total			0.0549	0.1213	0.0819	0.1811
Phenolic Compounds						
crude	0.003	0.013	0.0231	0.1001	0.0345	0.1495
lube	0.09	0.369	0.522	2.1402	0.7794	3.1955
asphalt	0.019	0.079	0.0209	0.0869	0.0314	0.1304
Total			0.566	2.3272	0.8453	3.4754

The technology based limits for this facility's process wastewater are as follows. CBOD5 limits are replacing the BOD5 limits due to nitrification.

Parameter	Production – 7,700 bbl/day		Production – 11,500 bbl/day	
	Average Monthly Limit lb/day	Daily Maximum Limit lb/day	Average Monthly Limit lb/day	Daily Maximum Limit lb/day
CBOD5	121.39	238.78	181.3	356.61
TSS	106.72	166.74	159.38	249.03
Ammonia	50.69	110.72	75.71	165.36
O & G	40.02	76.04	59.77	113.56
COD	880.41	1694.11	1314.89	2530.17
Sulfide	0.71	1.57	1.06	2.35
Total Chromium	0.6582	1.8893	0.9829	2.8214
Hexavalent Chromium	0.0549	0.1213	0.0819	0.1811
Phenolic Compounds	0.566	1.77	0.8453	2.65

Stormwater Calculations

The stormwater calculations are not affected by the permitted production levels. Therefore, only one set of calculations appears below.

The permittee also discharges contaminated stormwater through Outfall 001. The contaminated stormwater is stored in a pond prior to treatment. The contaminated stormwater is routed through the wastewater treatment system with the process wastewater. According to the renewal application submitted by the permittee, the contaminated stormwater, on average, comprises approximately 25% of the wastewater treated and discharged through Outfall 001. Therefore, the permit limits for the contaminated stormwater discharged through Outfall 001 will be based on 25% of the highest monthly average flow from the past two years – 0.12 MGD.

0.25 * 0.12 MGD = 0.03 MGD = 30,000 gpd (30 1,000 gpd)

Parameter	AML ELG, lb/1,000 gallons	DM ELG, lb/1,000 gallons	AML, lb/day	DML, lb/day
CBOD5[1, 2, 5]	0.22	0.4	6.6	12
TSS[1, 2]	0.18	0.28	5.4	8.4
COD[1, 3]	1.5	3	45	90
O & G[1, 2]	0.067	0.13	2.01	3.9
Phenolic Compounds[1, 3]	0.0014	0.0029	0.042	0.087

Parameter	AML ELG, lb/1,000 gallons	DM ELG, lb/1,000 gallons	AML, lb/day	DML, lb/day
Total Chromium[4]	0.0018	0.005	0.054	0.15
Hexavalent Chromium[1, 3]	0.00023	0.00052	0.0069	0.0156

1. BPT – 40 CFR 419.42(e)(2)
2. BCT – 40 CFR 419.44(e)(2)
3. BAT – 40 CFR 419.43(f)(2)
4. BAT – 40 CFR 419.43(f)(2). BAT limit more stringent than BPT limit.
5. The BOD5 requirements have been changed to CBOD5 due to nitrification.

The total technology based limits (stormwater and process wastewater) for Outfall 001 are as follows. The technology based limits will be compared to water quality based limits. The more stringent of the two will be placed in the permit as the limit.

Parameter	Production – 7,700 bbl/day		Production – 11,500 bbl/day	
	Average Monthly Limit lb/day	Daily Maximum Limit lb/day	Average Monthly Limit lb/day	Daily Maximum Limit lb/day
CBOD5	127.99	250.78	187.9	368.61
TSS	112.12	175.14	164.78	257.43
Ammonia	50.69	110.72	75.71	165.36
O & G	42.03	79.94	61.78	117.46
COD	925.41	1784.11	1359.89	2620.17
Sulfide	0.71	1.57	1.06	2.35
Total Chromium	0.7122	2.0393	1.1329	2.9714
Hexavalent Chromium	0.0618	0.1369	0.0888	0.1967
Phenolic Compounds	0.608	1.857	0.8873	2.737

Outfalls 002 and 003

Stormwater

Effluent limitations guidelines have been promulgated for stormwater runoff at a petroleum refinery. In accordance with the specified sections of 40 CFR 419, if wastewater consists solely of contaminated runoff and is not commingled with process wastewater, it may be discharged if it does not exceed the following limits:

40 CFR 419 Section	Parameter	Limit, mg/l
419.42(e)(1) & 419.43(f)(1)	TOC	110
419.42(e)(1) & 419.44(e)(1)	O & G	15

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

Parameter	Water Quality or Technology	Justification
OUTFALL 001		
CBOD5	Water Quality	MultiSMP Model dated 03/30/2011
TSS	Technology	40 CFR 419.44(a)
NH3-N	Water Quality	Reg. 2.512/MultiSMP Model dated 03/30/2011, concentration
	Technology	40 CFR 419.43(a), mass
DO	Water Quality	Reg. 2.505/MultiSMP model dated 03/30/2011
O & G	Water Quality	Reg. 2.510, concentration
	Technology	40 CFR 419.44(a), mass
COD	Technology	40 CFR 419.43(a)
Sulfides	Technology	40 CFR 419.43(a)
Phenolic Compounds	Technology	40 CFR 419.43(c)(1)(i)
Total Chromium	Technology	40 CFR 419.43(c)(1)(i)
Hexavalent Chromium, Dissolved	Water Quality	Reg. 2.508, concentration (year-round), mass May - October
	Technology	40 CFR 419.43(c)(1)(i), mass November – April
pH	Water Quality	Reg. 2.504
OUTFALLS 002 and 003		
TOC	Technology	40 CFR 419.43(f)(1)
O & G	Technology	40 CFR 419.44(e)(1)
TSS	Technology	2008 303(d) list
pH	Water Quality	Reg. 2.504

A MultiSMP model was performed in order to determine the CBOD5, NH3-N, and DO limits at Outfall 001 necessary to maintain the DO standards in the receiving stream. The NH3-N monthly average concentration limit for the critical season is changing since that toxicity-based limit is more stringent than the limit based on maintaining the DO standard in the receiving stream and the technology based standard. The other concentration limits are remaining unchanged.

TSS concentration limits at Outfall 001 and a monthly average O & G limit at Outfalls 002 and 003 have not been included in the permit based upon a permit appeal resolution, LIS #99-267 (APCEC Docket #99-014-P). The TSS limits at Outfall 001 are based upon the technology standards contained in 40 CFR 419.

COD, Sulfides, Phenolic Compounds, and Total Chromium are all based on the technology standards contained in 40 CFR 419. Water quality standards do not exist for these parameters.

The Hexavalent Chromium and the O & G limits at Outfall 001 are based on water quality standards contained in Regs. 2.508 and 2.510, respectively, as well as the technology standards contained in 40 CFR 419. See Item #13.F of this Fact Sheet for the calculations of the water quality based Hexavalent Chromium limits.

Monitoring requirements for TSS (Outfalls 002 and 003) have been included in the permit based upon the inclusion of Smackover Creek on the 2008 303(d) list.

C. **Comparison of Water Quality Based, Technology Based, and Previous Permit Limits**

Parameter	Water Quality Based		Technology Based		Previous Permit		Draft Permit	
	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l
TIER I – Production up to and including 9,240 bbl/day								
CBOD5								
(November – April)	30, 30 lb/day	45, 45 lb/day	127.99 lb/day	250.78 lb/day	30, 35 lb/day	45, 56 lb/day	30, 30 lb/day	45, 45 lb/day
(May – October)	12, 12 lb/day	18, 18 lb/day	127.99 lb/day	250.78 lb/day	12, 14 lb/day	18, 21 lb/day	12, 12 lb/day	18, 18 lb/day
TSS	N/A	N/A	112.2 lb/day	175.14 lb/day	141 lb/day	253 lb/day	112.2 lb/day	175.14 lb/day
NH3-N								
(November – April)	15, 15 lb/day	22.5, 22.5 lb/day	50.69 lb/day	110.72 lb/day	15, 18 lb/day	22.5, 26 lb/day	15, 15 lb/day	22.5, 22.5 lb/day
(May – October)	6.26, 6.26 lb/day	15, 15 lb/day	50.69 lb/day	110.72 lb/day	8.4, 10 lb/day	15, 18 lb/day	6.26, 6.26 lb/day	15, 15 lb/day
DO								
(November – April)	3.2 (Inst. Min.)		N/A		3.2 (Monthly Avg. Min.)		3.2 (Inst. Min.)	
(May – October)	4.0 (Inst. Min.)		N/A		4.0 (Monthly Avg. Min.)		4.0 (Inst. Min.)	

Parameter	Water Quality Based		Technology Based		Previous Permit		Draft Permit	
	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l
O & G	10	15	42.03 lb/day	79.94 lb/day	10, 52 lb/day	15, 101 lb/day	10, 42.03 lb/day	15, 79.94 lb/day
COD	N/A	N/A	925.41 lb/day	1784.11 lb/day	1164 lb/day	2255 lb/day	925.41 lb/day	1784.111 b/day
Sulfides	N/A	N/A	0.71 lb/day	1.57 lb/day	0.78 lb/day	1.74 lb/day	0.71 lb/day	1.57 lb/day
Phenolic Compounds	N/A	N/A	0.608 lb/day	2.4142 lb/day	1.14 lb/day	2.33 lb/day	0.608 lb/day	2.4142 lb/day
Total Chromium	N/A	N/A	0.7123 lb/day	20.393 lb/day	2.03 lb/day	4.63 lb/day	0.7123 lb/day	20.393 lb/day
Hexavalent Chromium, Dissolved								
(November – April)	131.99 µg/l, 0.136 lb/day	264.83 µg/l, 0.273 lb/day	0.0618 lb/day	0.1369 lb/day	73 µg/l, 0.09 lb/day	147 µg/l, 0.17 lb/day	131.99 µg/l, 0.0618 lb/day	264.83 µg/l, 0.1369 lb/day
(May – October)	25.07 µg/l, 0.031 lb/day	50.31 µg/l, 0.063 lb/day	0.0618 lb/day	0.1369 lb/day	31 µg/l, 0.04 lb/day	62 µg/l, 0.07 lb/day	25.07 µg/l, 0.031 lb/day	50.31 µg/l, 0.063 lb/day
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.	
TIER II – Production 9,241 bbl/day and up								
CBOD5								
(November – April)	30, 30 lb/day	45, 45 lb/day	187.9 lb/day	368.61 lb/day	30, 35 lb/day	45, 56 lb/day	30, 30 lb/day	45, 45 lb/day
(May – October)	12, 12 lb/day	18, 18 lb/day	187.9 lb/day	368.61 lb/day	12, 14 lb/day	18, 21 lb/day	12, 12 lb/day	18, 18 lb/day
TSS	N/A	N/A	164.78 lb/day	257.43 lb/day	141 lb/day	253 lb/day	164.78 lb/day	257.43 lb/day
NH3-N								

Parameter	Water Quality Based		Technology Based		Previous Permit		Draft Permit	
	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l
(November – April)	15, 15 lb/day	22.5, 22.5 lb/day	75.71 lb/day	165.36 lb/day	15, 18 lb/day	22.5, 26 lb/day	15, 15 lb/day	22.5, 22.5 lb/day
(May – October)	6.26, 6.26 lb/day	15, 15 lb/day	75.71 lb/day	165.36 lb/day	8.4, 10 lb/day	15, 18 lb/day	6.26, 6.26 lb/day	15, 15 lb/day
DO								
(November – April)	3.2 (Inst. Min.)		N/A		3.2 (Monthly Avg. Min.)		3.2 (Inst. Min.)	
(May – October)	4.0 (Inst. Min.)		N/A		4.0 (Monthly Avg. Min.)		4.0 (Inst. Min.)	
O & G	10	15	61.78 lb/day	117.46 lb/day	10, 52 lb/day	15, 101 lb/day	10 61.78 lb/day	15 117.46 lb/day
COD	N/A	N/A	1359.89 lb/day	2620.17 lb/day	1164 lb/day	2255 lb/day	1359.89 lb/day	2620.171 b/day
Sulfides	N/A	N/A	1.0369 lb/day	2.35 lb/day	0.78 lb/day	1.74 lb/day	1.0369 lb/day	2.35 lb/day
Phenolic Compounds	N/A	N/A	0.8873 lb/day	3.5624 lb/day	1.14 lb/day	2.33 lb/day	0.8873 lb/day	3.5624 lb/day
Total Chromium	N/A	N/A	1.0369 lb/day	2.9714 lb/day	2.03 lb/day	4.63 lb/day	1.0369 lb/day	2.9714 lb/day
Hexavalent Chromium, Dissolved								
(November – April)	131.99 µg/l 0.136 lb/day	264.83 µg/l 0.273 lb/day	0.0888 lb/day	0.1967 lb/day	73 µg/l 0.09 lb/day	147 µg/l 0.17 lb/day	131.99 µg/l 0.0888 lb/day	264.83 µg/l 0.1967 lb/day
(May – October)	25.07 µg/l 0.031 lb/day	50.31 µg/l 0.063 lb/day	0.0888 lb/day	0.1967 lb/day	31 µg/l 0.04 lb/day	62 µg/l 0.07 lb/day	25.07 µg/l 0.031 lb/day	50.31 µg/l 0.063 lb/day
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.	
OUTFALLS 002 and 003								
TOC	N/A	N/A	N/A	110	N/A	110	N/A	110

Parameter	Water Quality Based		Technology Based		Previous Permit		Draft Permit	
	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l	Monthly Avg. mg/l	Daily Max. mg/l
O & G	N/A*	15	N/A	15	N/A	15	N/A	15
TSS	N/A	N/A	N/A	Report	N/A	N/A	N/A	Report
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.	

*See LIS #99-267 (APCEC Docket #99-014-P).

D. **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).

Outfall 004 has been removed. Outfall 004 provided permit coverage for a tank farm located a driving distance of approximately 3 miles from the refinery. The stormwater runoff associated with the tank farm does not meet the definition of runoff located in 40 CFR 419.11. The permittee is required to obtain separate permit coverage for this outfall by the effective date of the renewal permit. This does not violate the anti-backsliding standards because Outfall 004 was previously included in the permit due to a mistaken interpretation of the regulations. See 40 CFR 122.44(l)(2)(i)(B)(*2*).

The Hexavalent Chromium limits during the primary season (November – April) at Outfall 001 have increased based upon the application of an updated 7Q10 and the use of the City of Smackover's lowest monthly average flows. The new 7Q10 is based upon information from the USGS. The inclusion of less stringent limits does not violate the anti-backsliding standards because the change is based upon new information. See 40 CFR 122.44(l)(i)(B)(*1*).

The technology based limits for Tier II are less stringent than the limits contained in the previous permit. The previous permit based all limits on a production level of 8,500 bbl/day and contained only one tier. The proposed draft permit has included two tiers so that the permittee may make modifications to their facility so that production capacity can be increased to 11,500 bbl/day. This does not violate the anti-backsliding standards because the change is based upon new information. See 40 CFR 122.44(l)(i)(B)(*1*).

No other permit limits are becoming less stringent or are being removed with this permit renewal.

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

The 208 Plan, developed by the ADEQ under provisions of Section 208 of the federal Clean Water Act, is a comprehensive program to work toward achieving federal water goals in Arkansas. The initial 208 Plan, adopted in 1979, provides for annual updates, but can be revised more often if necessary. The 208 Plan has been revised to change the NH3-N limit for the months of May – October to 5.47 mg/l and to update the background flows to include the City of Smackover's lowest monthly average flows for the primary season and the critical season. The background flow for the months of May through October is a total of 0.453 cfs (7Q10 = 0.36 cfs, Smackover avg. flow = 0.093 cfs). The background flow for the months of November through April is a total of 4.782 cfs (7Q10 = 4.55 cfs, Smackover avg. flow = 0.232 cfs).

F. **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	0.12 MGD = 0.1854 cfs	Application
7Q10*	0.453 cfs (May – Oct.) 4.55 cfs (Nov. – April)	U.S.G.S. and City of Smackover
TSS	5.5 mg/l	CPP
Hardness as CaCo3	31 mg/l	CPP
pH	6.62 s.u.	OUA0027 (3/09)

*U.S.G.S. gage 07362100 (Smackover Creek near Smackover, AR) 0.34 cfs (May – October), 4.55 cfs (November- April), 0.093 cfs from City of Smackover (May – October), 0.232 cfs from City of Smackover (November – April), and additional background of 0.02 cfs from watershed between U.S.G.S. gage and Outfall 001.

The following pollutants were reported above the required MQL:

Pollutant	Concentration Reported, µg/l	MQL, µg/l
Arsenic, Total Recoverable	4.19	0.5
Copper, Total Recoverable	1.27	0.5
Nickel, Total Recoverable	1.47	0.5
Phenols, Total Recoverable	14.6	5
Chloroform	33.4	10
Dichlorobromomethane	10	10

ADEQ has determined from the submitted information that the discharge does not pose the reasonable potential to cause or contribute to an exceedance above a water quality standard.

Reasonable potential for Total Recoverable Cyanide was demonstrated in the results of the PPS submitted to the Department with the permit renewal application. The Department contacted the facility to let them know the results of the reasonable potential calculations. The facility opted to conduct additional testing to determine if reasonable potential truly exists or if first test was an anomaly. Four additional tests were conducted over the course of several weeks. The samples taken were split between two laboratories. All results showed that Total Recoverable Cyanide was not present. Therefore, requirements for Total Recoverable Cyanide have not been included in the permit.

Although it was not detected during the PPS, water-quality based limits for Hexavalent Chromium were calculated in the manner set forth in the CPP for comparison with the technology based standards in order to ensure that the water quality of the receiving stream is maintained.

Final Limits		
Pollutant	AML, µg/l	DML, µg/l
Hexavalent Chromium		
(May – October)	25.07	50.31

Final Limits		
Pollutant	AML, µg/l	DML, µg/l
(November – April)	131.99	264.83

14. **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, and EPA Region 6 Post-Third Round Whole Effluent Toxicity Testing Frequencies, revised March 13, 2000. Whole effluent toxicity testing of the effluent is thereby required as a condition of this permit to assess potential toxicity. The whole effluent toxicity testing procedures stipulated as a condition of this permit are as follows:

TOXICITY TESTS	**FREQUENCY**
Chronic WET	Once/quarter

Requirements for measurement frequency are based on the CPP.

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

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

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

Critical Season

Qd = average flow = 0.12 MGD = 0.185 cfs
7Q10 = 0.36 cfs
City of Smackover lowest monthly average flow = 0.093 cfs
Qb = background flow = 0.67 X (0.36 + 0.093) = 0.304 cfs
CD = (0.185) / (0.185 + 0.304) X 100 = 38%

A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are 15%, 20%, 27%, 38%, and 51% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 38% effluent based on a 0.36 cfs 7Q10 flow of the receiving stream in addition to the critical season lowest monthly average flow of 0.093 cfs from the City of Smackover's WWTP.

Primary Season

Qd = average flow = 0.12 MGD = 0.185 cfs
7Q10 = 4.55 cfs
City of Smackover lowest monthly average flow = 0.232 cfs
Qb = Background flow = 0.67 X (4.55 + 0.232) = 3.204 cfs
CD = (0.185) / (0.185 + 3.204) X 100 = 5%

A minimum of five effluent dilutions in addition to an appropriate control (0%) are to be used in the toxicity tests. These additional effluent concentrations are 2.1%, 2.8%, 3.8%, 5%, and 6.7% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 5% effluent based on a 4.55 cfs 7Q10 flow of the receiving stream in addition to the primary season lowest monthly average flow of 0.232 cfs from the City of Smackover's WWTP.

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

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen conductivity, and alkalinity shall be reported according to EPA-

821-R-02-013, October 2002 and shall be submitted as an attachment to the Discharge Monitoring Report (DMR).

This permit may be reopened to require further WET testing studies, Toxicity Reduction Evaluation (TRE) and/or effluent limits if WET testing data submitted to the 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.

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Permit Number:	AR0000591		AFIN: 70-00039	Outfall Number:	001
Date of Review:	11/16/2011		Reviewer: M. Barnett		
Facility Name:	Martin Operating Partnership L.P.				
November – April	Previous Dilution series:	4, 6, 8, 10, 13	Proposed Dilution Series:	2.1, 2.8, 3.8, 5, 6.7	
November – April	Previous Critical Dilution:	10	Proposed Critical Dilution:	5	
Previous TRE activities:		None			

Frequency recommendation by species

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

TEST DATA SUMMARY

TEST DATE	Vertebrate		Invertebrate	
	Lethal NOEC	Sub-Lethal NOEC	Lethal NOEC	Sub-Lethal NOEC
Apr-06	47	47		
Dec-06	13	13	13	13
Mar-07	13	13	13	13
Apr-07	13	13	13	13
Nov-07			39	16
Dec-07	13	13	13	13
Mar-08	13	13	13	13
Apr-08	13	13	13	13
Dec-08	13	13	13	13
Jan-09			**4**	**4**
Feb-09			13	10
Mar-09	13	13	13	13
Dec-09	39	39		
Jan-10	13	13	13	13
Mar-10	13	13	13	13
Dec-10	13	13	13	13
Mar-11	13	13	13	13

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	Vertebrate Sub-Lethal	Invertebrate Lethal	Invertebrate Sub-Lethal
Min NOEC Observed	13	13	4	4
TU at Min Observed	7.69	7.69	25.00	25.00
Count	13	13	14	14
Failure Count	0	0	1	1
Mean	6.870	6.870	8.562	8.990
Std. Dev.	2.010	2.010	4.924	4.669
CV	0.3	0.3	0.6	0.5
RPMF	1.3	1.3	1.5	1.4
Reasonable Potential	1.000	1.000	3.750	3.500
100/Critical dilution	10.000	10.000	10.000	10.000
Docs Reasonable Potential Exist	No	No	No	No

PERMIT ACTION

P. promelas lethal - Monitoring
P. promelas sub-lethal - Monitoring
C. dubia lethal - Monitoring
C. dubia sub-lethal - Monitoring

DRAFT

Permit Number:	AR0000591		AFIN: 70-00039		Outfall Number: 001
Date of Review:	11/16/2011		Reviewer: M. Barnett		
Facility Name:	Martin Operating Partnership L.P.				
May – October	Previous Dilution series:	12, 16, 22, 29, 39	Proposed Dilution Series:	15, 20, 27, 38, 51	
May – October	Previous Critical Dilution:	29	Proposed Critical Dilution:	38	
Previous TRE activities:		None			

Frequency recommendation by species

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

TEST DATA SUMMARY

TEST DATE	Vertebrate		Invertebrate	
	Lethal NOEC	Sub-Lethal NOEC	Lethal NOEC	Sub-Lethal NOEC
May-06	47	47		
Jun-06	68	68	68	68
Sep-06	39	39	39	39
Jun-07	39	39	39	39
Sep-07	39	39	39	**16**
Oct-07			39	**16**
Sep-08	39	39	39	39
Jul-09			39	39
Sep-09	**16**	**16**	39	39
Jun-10	39	39	39	39
Jun-11	39	39	39	39
Sep-11	39	39	39	39

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	Vertebrate Sub-Lethal	Invertebrate Lethal	Invertebrate Sub-Lethal
Min NOEC Observed	16	16	39	16
TU at Min Observed	6.25	6.25	2.56	6.25
Count	10	10	11	11
Failure Count	1	1	0	2
Mean	2.780	2.780	2.465	3.135
Std. Dev.	1.270	1.270	0.330	1.574
CV	0.5	0.5	0.1	0.5
RPMF	1.6	1.6	1.1	1.6
Reasonable Potential	2.900	2.900	0.818	2.900
100/Critical dillution	3.448	3.448	3.448	3.448
Does Reasonable Potential Exist	No	No	No	No

PERMIT ACTION

P. promelas lethal - Monitoring
P. promelas sub-lethal - Monitoring
C. dubia lethal - Monitoring
C. dubia sub-lethal - Monitoring

November – April

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

During the reporting period from November to April, in the past five years there have been no *P. promelas* lethal or sub-lethal WET test failures and only one *C. dubia* lethal and sub-lethal WET test failure below the critical dilution. Additionally, according to the EPA's Reasonable Potential Calculation Spreadsheet, reasonable potential does not exist for *C. dubia* lethality or sub-lethality. At this time, there is insufficient evidence to support the inclusion of limits. Additional data is needed to confirm the necessity of limits; therefore they are not required at this time.

The inclusion of requirements for retests for failures will provide sufficient documentation concerning the necessity for a TRE, and the potential for inclusion of WET limits if appropriate.

May – October

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

During the reporting period from May to October, in the past five years there has been only one *P. promelas* lethal and sub-lethal WET test failure and two *C. dubia* sub-lethal WET test failures below the critical dilution. Additionally, according to the EPA's Reasonable Potential Calculation Spreadsheet, reasonable potential does not exist for *P. promelas* lethality or sub-lethality, or *C. dubia* sub-lethality. At this time, there is insufficient evidence to support the inclusion of limits. Additional data is needed to confirm the necessity of limits; therefore they are not required at this time.

The inclusion of requirements for retests for failures will provide sufficient documentation concerning the necessity for a TRE, and the potential for inclusion of WET limits if appropriate.

15. **SAMPLE TYPE AND FREQUENCY.**

Requirements for sample type and sampling frequency have been based on the current discharge permit. All "24-hr composite" sample types have been changed to "composite" to allow the permittee flexibility in how the samples are collected and to allow for the use of clean sampling techniques.

The flow sampling frequency at Outfalls 002 and 003 has been increased to once per month. The flow monitoring frequency has been increased in order to better match requirements for other facilities. The sample type and monitoring frequency for TSS at Outfalls 002 and 003 are based upon the requirements for the other parameters already in the permit for those

outfalls. A TSS monitoring frequency of once per quarter will provide sufficient data over the life of the permit to evaluate the effect of the effluent on Smackover Creek.

Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Outfall 001				
Flow	five/week	instantaneous	five/week	instantaneous
CBOD5				
(November – April)	twice/week	24-hr composite	twice/week	composite
(May – October)	twice/week	24-hr composite	twice/week	composite
TSS	twice/week	24-hr composite	twice/week	composite
NH3-N				
(November – April)	once/week	24-hr composite	once/week	composite
(May – October)	once/week	24-hr composite	once/week	composite
DO				
(November – April)	twice/week	grab	twice/week	grab
(May – October)	twice/week	grab	twice/week	grab
O & G	twice/week	grab	twice/week	grab
COD	twice/week	24-hr composite	twice/week	composite
Sulfides	once/week	24-hr composite	once/week	composite
Phenolic Compounds	once/week	24-hr composite	once/week	composite
Total Chromium	once/week	24-hr composite	once/week	composite
Hexavalent Chromium, Dissolved				
(November – April)	twice/month	24-hr composite	twice/month	composite
(May – October)	twice/month	24-hr composite	twice/month	composite
pH	once/week	grab	once/week	grab
Outfalls 002 and 003				
Flow	once/quarter	estimate	once/month	grab

Parameter	Previous Permit		Draft Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
TOC	once/quarter	grab	once/quarter	grab
O & G	once/quarter	grab	once/quarter	grab
TSS	N/A	N/A	once/quarter	grab
pH	once/quarter	grab	once/quarter	grab

16. **PERMIT COMPLIANCE.**

A Schedule of Compliance has not been included in this permit. Compliance with all permit requirements is required on the effective date of the permit.

17. **MONITORING AND REPORTING.**

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

18. **SOURCES.**

The following sources were used to draft the permit:

A. Application No. AR0000591 received 12/27/2010.
B. Arkansas Water Quality Management Plan (WQMP).
C. APCEC Regulation No. 2.
D. APCEC Regulation No. 3.
E. APCEC Regulation No. 6.
F. 40 CFR Parts 122, 125, and 419.
G. Discharge permit file AR0000591.
H. Discharge Monitoring Reports (DMRs).
I. "Arkansas Water Quality Inventory Report 2010 (305(b))", ADEQ.
J. "Identification and Classification of Perennial Streams of Arkansas", Arkansas Geological Commission.
K. Continuing Planning Process (CPP).
L. Technical Support Document For Water Quality-based Toxic Control.
M. Inspection Report dated 3/17/2010.
N. Site visit on 3/16/2011.
O. Letter from Nancy Gambill, P.E., CFM, dated 4/21/2011.
P. City of Smackover flow data, NPDES Permit No. AR0021440.
Q. E-mail from Mike Tillman of EPA Region VI to Mo Shafii dated 9/22/2011.

R. Letter from Charlie Clark to Loretta Reiber, P.E. dated 11/10/2011.
S. Meeting between permittee and ADEQ on 12/7/2011.
T. Letter from Charlie Clark to Loretta Reiber, P.E. dated 5/9/2012.
U. E-mail from Mike Tillman of EPA Region VI to Mo Shafii dated 6/5/2012.

19. **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.

20. **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

DRAFT

Permit Number: AR0000591
AFIN: 70-00039

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 (Act 472 of 1949, as amended, Ark. Code Ann. 8-4-101 et seq.), and the Clean Water Act (33 U.S.C. § 1251 et seq.),

The applicant's mailing address and physical location is:

Martin Operating Partnership L.P.
484 East 6th Street
Smackover, AR 71762

is authorized to discharge treated process wasterwater, contaminated runoff, and runoff from a facility located as follows: approximately 1/2 mile northeast of downtown Smackover at 484 East 6th Street in Union County, Arkansas.

Latitude: 33° 21' 51.25"; Longitude: 92° 43' 03.65"

to receiving waters named:

Outfall 001: Smackover Creek, thence to the Ouachita River in Segment 2D of the Ouachita River Basin.
Outfalls 002 and 003: an unnamed tributary of Smackover Creek, thence into Smackover Creek, thence into the Ouachita River in Segment 2D of the Ouachita River Basin.

The outfalls are located at the following coordinates:

Outfall 001: Latitude: 33° 22' 12.6"; Longitude: 92° 42' 45.0"
Outfall 002: Latitude: 33° 21' 52.52" Longitude: 92° 42' 42.87"
Outfall 003: Latitude: 33° 21' 44.0"; Longitude: 92° 42' 42.5"

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

Effective Date:
Expiration Date:

Steven L. Drown
Chief, Water Division
Arkansas Department of Environmental Quality

Issue Date

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PART I
PERMIT REQUIREMENTS

SECTION A. TIER I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated process wasterwater and contaminated stormwater runoff.

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 – production = up to and including 9,240 bbl/day[3]

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	continuous	record
Carbonaceous Biochemical Oxygen Demand (CBOD5)						
(November – April)	30	45	30	45	two/week	composite
(May – October)	12	18	12	18	two/week	composite
Total Suspended Solids (TSS)	112.2	171.61	Report	Report	two/week	composite
Ammonia-Nitrogen (NH3-N)						
(November – April)	15	22.5	15	22.5	one/week	composite
(May – October)	6.26	15	6.26	15	one/week	composite
Dissolved Oxygen (DO)						
(November – April)	N/A	N/A	3.2, Inst. Minimum		two/week	grab
(May – October)	N/A	N/A	4.0, Inst. Minimum		two/week	grab
Oil and Grease (O & G)	42.03	79.94	10	15	two/week	grab
Chemical Oxygen Demand (COD)	925.41	1784.11	Report	Report	two/week	composite
Sulfides	0.71	1.57	Report	Report	one/week	composite
Phenolic Compounds	0.608	2.4142	Report	Report	one/week	composite
Total Chromium[1]	0.7123	20.393	Report µg/l	Report µg/l	one/week	composite
Hexavalent Chromium, Dissolved[1]						
(November – April)	0.0618	0.1369	131.99 µg/l	264.83 µg/l	two/month	composite
(May – October)	0.031	0.063	25.07 µg/l	50.31 µg/l	two/month	composite
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	one/week	grab
Chronic WET Testing[2]	N/A	N/A	Report %		once/quarter	composite

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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		
Pimephales promelas (Chronic)[2]			7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP6C			Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Growth (7-day NOEC)TGP6C			Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP6C			Report %		once/quarter	composite
Coefficient of Variation (Growth) TQP6C			Report %		once/quarter	composite
Growth (7-day NOEC) TPP6C			Report %		once/quarter	composite
Ceriodaphnia dubia (Chronic)[2]			7-Day Average			
Pass/Fail Lethality (7-day NOEC) TLP3B			Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail production (7-day NOEC)TGP3B			Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP3B			Report %		once/quarter	composite
Coefficient of Variation (Reproduction) TQP3B			Report %		once/quarter	composite
Reproduction (7-day NOEC) TPP3B			Report %		once/quarter	composite

1 See Condition No. 5 of Part II (Metals Condition).
2 See Condition No. 6 of Part II. (WET Testing Conditions)
3 See Condition No. 8 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 as defined in Part IV of this permit.

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

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PART I
PERMIT REQUIREMENTS

SECTION A. TIER II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 - treated process wasterwater and contaminated stormwater runoff.

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 – production = 9,241 bbl/day and above[3]

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	continuous	record
Carbonaceous Biochemical Oxygen Demand (CBOD5)						
(November – April)	30	45	30	45	two/week	composite
(May – October)	12	18	12	18	two/week	composite
Total Suspended Solids (TSS)	164.78	257.43	Report	Report	two/week	composite
Ammonia-Nitrogen (NH3-N)						
(November – April)	15	22.5	15	22.5	one/week	composite
(May – October)	6.26	15	6.26	15	one/week	composite
Dissolved Oxygen (DO)						
(November – April)	N/A	N/A	3.2, Inst. Minimum		two/week	grab
(May – October)	N/A	N/A	4.0, Inst. Minimum		two/week	grab
Oil and Grease (O & G)	61.78	117.46	10	15	two/week	grab
Chemical Oxygen Demand (COD)	1359.89	2620.17	Report	Report	two/week	composite
Sulfides	1.06	2.35	Report	Report	one/week	composite
Phenolic Compounds	0.89	3.56	Report	Report	one/week	composite
Total Chromium[1]	1.04	2.97	Report µg/l	Report µg/l	one/week	composite
Hexavalent Chromium, Dissolved[1]						
(November – April)	0.0888	0.1967	131.99 µg/l	264.83 µg/l	two/month	composite
(May – October)	0.031	0.063	25.07 µg/l	50.31 µg/l	two/month	composite
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	one/week	grab
Chronic WET Testing[2]	Daily Average Min. Report %		7-day Min. Report %		once/quarter	composite
Pimephales promelas (Chronic)[2]			7-Day Average			
Pass/Fail Growth (7-day NOEC)TLP6C			Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Lethality (7-day NOEC) TGP6C			Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP6C			Report %		once/quarter	composite
Coefficient of Variation (growth) TQP6C			Report %		once/quarter	composite
Growth (7-day NOEC) TPP6C			Report %		once/quarter	composite

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		
Ceriodaphnia dubia (Chronic)[2]			7-Day Average			
Pass/Fail Growth (7-day NOEC)TLP3B			Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Lethality (7-day NOEC) TGP3B			Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP3B			Report %		once/quarter	composite
Coefficient of Variation (reproduction) TQP3B			Report %		once/quarter	composite
Reproduction (7-day NOEC) TPP3B			Report %		once/quarter	composite

1 See Condition No. 5 of Part II (Metals Condition).
2 See Condition No. 6 of Part II (WET Testing Conditions).
3 See Condition No. 8 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 as defined in Part IV of this permit.

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

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PART I
PERMIT REQUIREMENTS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALLS 002 and 003 - contaminated stormwater runoff.

During the period beginning on the effective date and lasting until the date of expiration, the permittee is authorized to discharge from Outfalls 002 and 003. 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	one/month	estimate
Total Organic Carbon (TOC)	N/A	N/A	N/A	110	one/quarter	grab
Oil and Grease (O & G)	N/A	N/A	N/A	15	one/quarter	grab
Total Suspended Solids (TSS)	N/A	N/A	N/A	Report	one/quarter	grab
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	one/quarter	grab

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

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge during the entire monitoring period. Samples shall be taken after all stormwater discharged through a single outfall has commingled and prior to entering the receiving stream.

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SECTION B. PERMIT COMPLIANCE

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

Compliance with all limits is required on the effective date of the permit.

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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 acceptable to the Director; 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. Monitoring Frequency Reduction

   After the submittal of 12 months (minimum of 12 data points) of data, the permittee may request, in writing, Department approval of a reduction in monitoring frequency. This request shall contain an explanation as to why the reduced monitoring is appropriate. A reduction will only be allowed if effluent concentrations are below the discharge limitations and there is minimal variability in the effluent concentrations. Upon receipt of written approval by the Department, the permittee may reduce the monitoring frequency indicated below. A onetime monitoring frequency reduction for every parameter except flow shall not be reduced to less than one per month for monitoring frequencies currently set at two per month, two per month for monitoring frequencies currently set at one per week, and one per quarter for monitoring frequencies currently set at one per month. The Department may revoke the approval for reduced monitoring at any time upon notification to the permittee. This condition applies only to Outfall 001. Frequency reductions will not be granted for Outfalls 002 and 003.

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

Pollutant	MQL (µg/l)
Total Chromium	10
Hexavalent Chromium, Dissolved	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:

   $$MQL = 3.3 \times MDL$$

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

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

1. SCOPE AND METHODOLOGY

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

APPLICABLE TO FINAL OUTFALL(S):	001
REPORTED ON DMR AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	Nov. – April: 5% May – Oct.: 38%
EFFLUENT DILUTION SERIES (%):	Nov. – April 2.1%, 2.8%, 3.8%, 5%, 6.7% May – Oct. 15%, 20%, 27%, 38%, 51%
TESTING FREQUENCY	once/quarter
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

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

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

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

c. 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 LETHAL and/or SUB-LETHAL EFFECTS

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal and/or sub-lethal effects at or below the critical dilution. The purpose of 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 or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the life of the permit. In addition:

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 toxic 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 LETHAL EFFECTS HAVE BEEN DEMONSTRATED 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 also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests. A TRE required based on lethal effects should consider any sub-lethal effects as well.

iii. IF SUB-LETHAL EFFECTS ONLY HAVE BEEN DEMONSTRATED If any two of the three additional tests demonstrates significant sub-lethal effects at 75% effluent or lower, the permittee shall initiate the Sub-Lethal Toxicity Reduction

Evaluation (TRE_{SL}) 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 Sub-Lethal Effects TRE initiation date will be the test completion date of the first failed retest. A TRE may be also be required for failure to perform the required retests.

iv. The provisions of Item 2.a.i. 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 toxic effects at or below the critical dilution. A TRE may also be required due to a demonstration of intermittent lethal and/or sub-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. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.

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

iii. 60% of the surviving control females must produce three broods. The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.

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

v. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or sub-lethal effects are exhibited for: the

young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.

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

vii. 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%.

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

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

b. Statistical Interpretation

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

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

iii. If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

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

permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water 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., 7 days);

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

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

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

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

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. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.

vi. MULTIPLE OUTFALLS: If the provisions of this section are applicable to multiple outfalls, the permittee shall combine the composite effluent samples in proportion to the average flow from the outfalls listed in item 1.a. above for the day the sample was collected. The permittee shall perform the toxicity test on the flow-weighted composite of the outfall samples.

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

4. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/821/R-02-013, or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.7 of this permit. The permittee shall submit

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

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 lethal and sub-lethal effects results for each species during the reporting period. The full reports for all invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for Agency review.

c. The permittee shall submit the results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.

i. Pimephales promelas (Fathead minnow)

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

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

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

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

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

ii. Ceriodaphnia dubia

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

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

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

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

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

5. TOXICITY REDUCTION EVALUATIONS (TREs)

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

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

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) and 'Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I' (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents 'Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity' (EPA/600/R-92/080) and 'Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity' (EPA/600/R-92/081), as appropriate.

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

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

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;

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

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

v. 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:

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

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

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

A copy of the TRE Activities Report shall also be submitted to the state agency.

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

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the state agency.

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 or sub-lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the Fathead minnow) and not less than twice per year for the more sensitive test species (usually the Ceriodaphnia dubia).

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 and sub-lethal effects and the maximum coefficient of variation for the controls. Upon review and acceptance of this information the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's Permit Compliance System section to update the permit reporting requirements.

c. SUB-LETHAL OR SURVIVAL FAILURES - If any test fails the survival or sub-lethal 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.

   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.

7. Stormwater runoff commingling with other process wastewater discharged from Outfall 001 and stormwater runoff discharged through Outfalls 002 and 003 shall be managed in accordance with Best Management Practices (BMPs) to control the quality of stormwater discharges associated with industrial activity that are authorized by this permit. All spilled products and other spilled wastes must be immediately cleaned up and properly disposed. The permittee must amend the BMPs whenever there is a change in the facility or a change in the operation of the facility.

8. The permittee must submit DMRs for both tiers each monitoring period even if they operate under only one tier during that monitoring period. If the permittee operates under both tiers in a given monitoring period, the permittee must conduct the required tests for both tiers, even if it means conducting more tests than would be required if they operated under only one tier.

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PART III
STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. Duty to Comply

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

2. Penalties for Violations of Permit Conditions

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

3. Permit Actions

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

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

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

4. Toxic Pollutants

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

6. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject 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 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

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering the waters of the State. Written approval must be obtained from the ADEQ prior to removal of substances. Additionally, the permittee shall give at least 120 days prior notice to the Director of any change planned in the permittee's sludge disposal practice or land use applications, including types of crops grown (if applicable). Produced sludge shall be disposed of by land application only when meeting the following criteria:

A. Sewage sludge from treatment works treating domestic sewage (TWTDS) must meet the applicable provisions of 40 CFR Part 503; and
B. The sewage sludge has not been classified as a hazardous waste under state or federal regulations.

7. Power Failure

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

SECTION C – MONITORING AND RECORDS

1. Representative Sampling

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

2. Flow Measurement

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

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.4), 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 within 180 days and provide plans and specification (if applicable) to the Director for review and approval prior to any planned physical alterations or additions to the permitted facility. In no case are any new connections, increased flows, removal of substances, or significant changes in influent quality permitted that cause violation of the effluent limitations specified herein.

2. Anticipated Noncompliance

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

3. Transfers

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

4. Monitoring Reports

Monitoring results shall be reported at the intervals and in the form specified in Part 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 (Act 472 of 1949, as amended).

14. 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, state, or local statute, ordinance, policy, or regulation.

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PART IV
DEFINITIONS

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

1. **"Act"** means the Clean Water Act, Public Law 95-217 (33.U.S.C. 1251 et seq.) as amended.
2. **"Administrator"** means the Administrator of the U.S. Environmental Protection Agency.
3. **"APCEC"** means the Arkansas Pollution Control and Ecology Commission.
4. **"Applicable effluent standards and limitations"** means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.
5. **"Applicable water quality standards"** means all water quality standards to which a discharge is subject under the federal Clean Water Act and which has been (a) approved or permitted to remain in effect by the Administrator following submission to the Administrator pursuant to Section 303(a) of the Act, or (b) promulgated by the Director pursuant to Section 303(b) or 303(c) of the Act, and standards promulgated under (APCEC) Regulation No. 2, as amended.
6. **"Bypass"** As defined at 122.41(m).
7. **"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.
8. **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.
9. **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.
10. **"Department"** means the Arkansas Department of Environmental Quality (**ADEQ**).
11. **"Director"** means the Director of the Arkansas Department of Environmental Quality.
12. **"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.

13. **"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.
14. **"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.
15. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
16. **"Industrial User**" means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
17. **"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.
18. **"Instantaneous Minimum"** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
19. **"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.
20. **"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.
21. **"POTW"** means a Publicly Owned Treatment Works.
22. **"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.
23. **"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.
24. **"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.
25. **"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.

26. **"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.
27. **"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.
28. **"MGD"** shall mean million gallons per day.
29. **"mg/l** "shall mean milligrams per liter or parts per million (ppm).
30. **"µg/l"** shall mean micrograms per liter or parts per billion (ppb).
31. **"cfs"** shall mean cubic feet per second.
32. **"ppm"** shall mean parts per million.
33. **"s.u."** shall mean standard units.
34. **"Weekday"** means Monday – Friday.
35. **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.