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

Martin Operating Partnership L.P.

is authorized to discharge treated process wasterwater and contaminated stormwater from a facility located as follows: 484 East 6th Street, Smackover, AR 71762, Approximately 1/2 mile northeast of downtown Smackover at 484 East 6th Street in Union County, Arkansas. The applicant's mailing address is: 484 East 6th Street, Smackover, AR 71762.

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

to receiving waters named:

Outfall 001: Smackover Creek, thence to the Ouachita River in Segment 2D of the Ouachita River Basin
Outfall 002: an unnamed tributary of Smackover Creek, thence into Smackover Creek, thence into the Ouachita River in Segment 2D of the Ouachita River Basin
Outfall 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 outfall is located at the following coordinates:

Outfall 001: Latitude: 33° 22' 12.6" N; Longitude: 92° 42' 45.0" W
Outfall 002: Latitude: 33° 21' 53.1" N; Longitude: 92° 42' 43.6" W
Outfall 003: Latitude: 33° 21' 40.6" N; Longitude: 92° 42' 46.5" W

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

Effective Date: January 1, 2019
Expiration Date: December 31, 2023

Caleb J. Osborne
Associate Director, Office of Water Quality
Arkansas Department of Environmental Quality

12. 11. 18
Issue Date

PART I
PERMIT REQUIREMENTS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: Outfall 001: treated process wasterwater and contaminated stormwater.

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

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)	74.31	111.46	30	45	twice/week	composite
(May – October)	23.82	35.73	12	18	twice/week	composite
Total Suspended Solids (TSS)	112.2	175.14	Report	Report	twice/week	composite
Ammonia-Nitrogen (NH3-N)						
(November – April)	37.15	55.73	15	22.5	once/week	composite
(May – October)	8.34	18.66	4.2	9.4	once/week	composite
Dissolved Oxygen (DO)						
(November – April)	N/A	N/A	3.2, Inst. Minimum		twice/week	grab
(May – October)	N/A	N/A	4.0, Inst. Minimum		twice/week	grab
Oil and Grease (O & G)	42.03	79.94	10.0	15.0	twice/week	grab
Chemical Oxygen Demand (COD)	925.41	1784.11	Report	Report	twice/week	composite
Sulfides	0.71	1.57	Report	Report	once/week	composite
Phenolic Compounds	0.608	2.4142	Report	Report	once/week	composite
Total Chromium[1]	0.7123	20.393	Report µg/l	Report µg/l	once/week	composite
Hexavalent Chromium, Dissolved[1]						
(November – April)	0.0618	0.1369	Report µg/l	Report µg/l	twice/month	composite
(May – October)	0.0381	0.077	Report µg/l	Report µg/l	twice/month	composite
Total Recoverable Lead[1]	Report	Report	Report µg/l	Report µg/l	once/quarter	composite
Total Recoverable Arsenic[1, 3]	Report	Report	Report µg/l	Report µg/l	once/quarter	composite
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	once/week	grab
Chronic WET Testing[2]	N/A	N/A	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		
Pimephales promelas (Chronic)[2]						
Pass/Fail Lethality (7-day NOEC) TLP6C			Report (Pass=0/Fail=1)		once/quarter	composite
Pass/Fail Growth (7-day NOEC)TGP6C			Report (Pass=0/Fail=1)		once/quarter	composite
Survival (7-day NOEC) TOP6C			Report %		once/quarter	composite
Coefficient of Variation (Growth) TQP6C			Report %		once/quarter	composite
Growth (7-day NOEC) TPP6C			Report %		once/quarter	composite
Pass/Fail Retest 1 (7-day NOEC) 22418			Report (Pass=0/Fail=1)		once/month[4]	composite
Pass/Fail Retest 2 (7-day NOEC) 22419			Report (Pass=0/Fail=1)		once/month[4]	composite
Pass/Fail Retest 3 (7-day NOEC) 51444			Report (Pass=0/Fail=1)		once/month[4]	composite
Ceriodaphnia dubia (Chronic)[2]						
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
Pass/Fail Retest 1 (7-day NOEC) 22415			Report (Pass=0/Fail=1)		once/month[4]	composite
Pass/Fail Retest 2 (7-day NOEC) 22416			Report (Pass=0/Fail=1)		once/month[4]	composite
Pass/Fail Retest 3 (7-day NOEC) 51443			Report (Pass=0/Fail=1)		once/month[4]	composite

[1] See Condition No. 5 of Part II (Metals Condition).
[2] See Condition No. 6 of Part II. (WET Testing Conditions)
[3] Monitoring and reporting of Total Recoverable Arsenic is only required during the first four quarters of the permit.
[4] CONDITIONAL REPORTING: Use only if conducting retests due to a test failure (demonstration of significant toxic effects at or below the critical dilution). If testing on a quarterly basis, the permittee may substitute one of the retests in lieu of one routine toxicity test. If retests are not required, Report NODI=9 (Conditional Monitoring - Not Required This Period) under retest parameters. (reported on a quarterly DMR)

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.

PART I
PERMIT REQUIREMENTS

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

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**[1]	
	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/quarter	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)[3]	N/A	N/A	N/A	Report	one/quarter	grab
Total Recoverable Lead[2]	N/A	N/A	N/A	Report µg/l	one/year	grab
pH	N/A	N/A	Minimum 6.0 s.u.	Maximum 9.0 s.u.	one/quarter	grab

1 All samples must be taken from a storm event that is greater than 0.1 inch and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The permittee must maintain documentation of compliance with this condition on site. The documentation may consist of rain data compiled by the permittee, data obtained from the National Weather Service, or other data approved by the Department.
2 See Condition No. 5 of Part II (Metals Condition).
3 See Condition No. 7 of Part II (TSS Benchmark condition).

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.

SECTION B. PERMIT COMPLIANCE SCHEDULE

None.

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 APC&EC Regulation No. 3.

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 Office of Water Quality of the ADEQ for use of the alternate method or instrument.
   - The method and/or instrument is in compliance with 40 CFR Part 136 or approved in accordance with 40 CFR Part 136.5.
   - All associated devices are installed, calibrated, and maintained to ensure the accuracy of the measurements and are consistent with the accepted capability of that type of device. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality 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. Best Management Practices (BMPs), as defined in Part IV.6, must be implemented for the facility to prevent or reduce the pollution of waters of the State from stormwater runoff, spills or leaks, and/or waste disposal. The permittee must amend the BMPs whenever there is a change in the facility or a change in the operation of the facility.

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

Pollutant	MQL (µg/l)

Total Recoverable Chromium	10
Dissolved Hexavalent Chromium	10
Total Recoverable Arsenic	0.5
Total Recoverable Lead	0.5

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

MQL = 3.3 x MDL

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

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

A. SCOPE AND METHODOLOGY

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

APPLICABLE TO FINAL OUTFALL: 001

REPORTED ON DMR AS FINAL OUTFALL: 001

CRITICAL DILUTION (%): critical season (May – Oct.) – 57%
primary season (Nov. – Apr.) – 13%

EFFLUENT DILUTION SERIES (%): critical season
24%, 32%, 43%, 57%, and 76%

primary season
5%, 7%, 10%, 13%, and 17%

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.

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

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

B. PERSISTENT LETHAL and/or SUB-LETHAL EFFECTS

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

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

i. Part I Testing Frequency Other Than Monthly

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

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

c. IF SUB-LETHAL EFFECTS ONLY HAVE BEEN DEMONSTRATED If any two of the three retests demonstrates significant sub-lethal effects at 75% effluent or lower, the permittee shall initiate the Sub-Lethal Toxicity Reduction Evaluation (TRE_{SL}) requirements as specified in Item E of this section. The permittee shall notify ADEQ in writing within 5 days of the failure of any retest, and the Sub-Lethal Effects TRE initiation date will be the test completion date of the first failed retest. A TRE may be also be required for failure to perform the required retests.

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

C. REQUIRED TOXICITY TESTING CONDITIONS

i. Test Acceptance

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

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

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

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

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

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

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

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

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

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

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

ii. Statistical Interpretation

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

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

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

iii. Dilution Water

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

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

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

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

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

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

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

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

iv. Samples and Composites

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

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

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

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

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

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

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

D. REPORTING

i. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/821/R-02-013, or the most current publication, for every valid or invalid toxicity test initiated

whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.7 of this permit. The permittee shall submit full reports. For any test or retest which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

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

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

a. Pimephales promelas (Fathead minnow)

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

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

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

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

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

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

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

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

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

(D) If testing on a quarterly basis, the permittee may substitute one of the

retests in lieu of one scheduled toxicity test;

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

b. Ceriodaphnia dubia

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

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

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

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

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

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

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

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

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

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

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

E. TOXICITY REDUCTION EVALUATIONS (TREs)

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

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

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

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

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

   b. Sampling Plan (e.g., locations, methods, holding times, chain of custody,

preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

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

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

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

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

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

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

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

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

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

v. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing

alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

F. MONITORING FREQUENCY REDUCTION

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

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

iii. SUB-LETHAL OR SURVIVAL FAILURES - Monthly retesting is not required if the permittee is performing a TRE.

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

7. TSS Benchmark

If the TSS monitoring results from Outfall 002 or Outfall 003 of Part IA of this permit exceed the parameter benchmark value of 100 mg/l, the facility shall investigate the cause and/or source of the elevated pollutant levels, review the BMPs, and determine and document a corrective action plan to address the benchmark exceedance. The facility shall commence with the above process within 30 calendar days of the exceedance.

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

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

Failure to meet the benchmark value of 100 mg/l may result in the inclusion of TSS or turbidity limits in the permit at the time of the next renewal.

PART III
STANDARD CONDITIONS

SECTION A – GENERAL CONDITIONS

1. **Duty to Comply**

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

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

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

3. **Permit Actions**

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

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

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

4. **Toxic Pollutants**

Notwithstanding Part III.A.3, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under APC&EC 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 APC&EC Regulation No. 2, as amended, or Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. **Civil and Criminal Liability**

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

6. **Oil and Hazardous Substance Liability**

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

7. **State Laws**

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

8. **Property Rights**

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

9. **Severability**

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

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

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

11. **Permit Fees**

The permittee shall comply with all applicable permit fee requirements (i.e., including annual permit fees following the initial permit fee that will be invoiced every year the permit is active) for wastewater discharge permits as described in APC&EC 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 APC&EC Regulation No. 6 and the provisions of APC&EC 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 ensure compliance with the conditions of this permit.

2. **Need to Halt or Reduce not a Defense**

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

3. **Duty to Mitigate**

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

4. **Bypass of Treatment Facilities**

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

A. Bypass not exceeding limitation

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

B. Notice

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

C. Prohibition of bypass

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

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

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

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

5. **Upset Conditions**

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

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

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

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

6. **Removed Substances**

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

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

7. **Power Failure**

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

SECTION C – MONITORING AND RECORDS

1. **Representative Sampling**

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

2. **Flow Measurement**

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

Calculated Flow Measurement

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

3. **Monitoring Procedures**

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals frequent enough to ensure accuracy of measurements and shall ensure that both calibration and maintenance activities will be conducted. An adequate analytical quality control program, including the analysis of sufficient standards, spikes, and

duplicate samples to ensure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory. At a minimum, spikes and duplicate samples are to be analyzed on 10% of the samples.

4. **Penalties for Tampering**

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

5. **Reporting of Monitoring Results**

40 CFR 127.11 (a)(1) and 40 CFR 127.16 (a) require that monitoring reports must be reported on a Discharge Monitoring Reports (DMR) and filed electronically. Signatory Authorities must initially request access for a NetDMR account. Once a NetDMR account is established, access to electronic filing should use the following link https://cdx.epa.gov. Permittees who are unable to file electronically may request a waiver from the Director in accordance with 40 CFR 127.15. Monitoring results obtained during the previous monitoring period shall be summarized and reported on a DMR dated and submitted no later than the 25th day of the month, following the completed reporting period beginning on the effective date of the permit.

6. **Additional Monitoring by the Permittee**

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

7. **Retention of Records**

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

8. **Record Contents**

Records and monitoring information shall include:

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

9. **Inspection and Entry**

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

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

SECTION D – REPORTING REQUIREMENTS

1. **Planned Changes**

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

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

2. **Anticipated Noncompliance**

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

3. **Transfers**

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

4. **Monitoring Reports**

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

5. **Compliance Schedule**

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

6. **Twenty-four Hour Report**

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.
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.

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 Office of Water Quality 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 Office of Water Quality 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 Director shall be notified as soon as the permittee knows or has reason to believe:

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

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

9. **Duty to Provide Information**

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

10. **Duty to Reapply**

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

later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated in APC&EC 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.
(b) The manager of one or more manufacturing, production, or operation facilities, provided: the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

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

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

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

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

1. The authorization is made in writing by a person described above.

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

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

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

12. **Availability of Reports**

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

13. **Penalties for Falsification of Reports**

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

14. **Other Information**

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

PART IV
DEFINITIONS

All definitions contained in Section 502 of the Clean Water Act and 40 CFR 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. **"APC&EC"** 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 (APC&EC) Regulation No. 2, as amended.
6. **"Best Management Practices (BMPs)"** are activities, practices, maintenance procedures, and other management practices designed to prevent or reduce the pollution of waters of the State. BMPs also include treatment technologies, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw sewage. BMPs may include structural devices or nonstructural practices.
7. **"Bypass"** means the intentional diversion of waste streams from any portion of a treatment facility, as defined at 40 CFR 122.41(m)(1)(i).
8. **"Composite sample"** is a mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of 4 effluent portions collected at equal time intervals (but not closer than one hour apart) during operational hours, within the 24-hour period, and combined proportional to flow or a sample collected at more frequent intervals proportional to flow over the 24-hour period.
9. **"Daily Discharge"** means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling.
   A. **Mass Calculations**: For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of pollutant discharged over the sampling day.
   B. **Concentration Calculations**: For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.
10. **"Daily Maximum"** discharge limitation means the highest allowable "daily discharge" during the calendar month.
11. **"Department"** means the Arkansas Department of Environmental Quality (**ADEQ**).
12. **"Director"** means the Director of the Arkansas Department of Environmental Quality.

13. **"Dissolved oxygen limit"** shall be defined as follows:
    A. When limited in the permit as a minimum monthly average, shall mean the lowest acceptable monthly average value, determined by averaging all samples taken during the calendar month.
    B. When limited in the permit as an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
14. **"E-Coli"** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For E-Coli, report the Daily Maximum as the highest "daily discharge" during the calendar month, and the Monthly Average as the geometric mean of all "daily discharges" within a calendar month, in colonies per 100 ml.
15. **"Fecal Coliform Bacteria (FCB)"** a sample consists of one effluent grab portion collected during a 24-hour period at peak loads. For FCB, report the Daily Maximum as the highest "daily discharge" during the calendar month, and the Monthly Average as the geometric mean of all "daily discharges" within a calendar month, in colonies per 100 ml.
16. **"Grab sample"** means an individual sample collected in less than 15 minutes in conjunction with an instantaneous flow measurement.
17. **"Industrial User**" means a nondomestic discharger, as identified in 40 CFR Part 403, introducing pollutants to a POTW.
18. **"Instantaneous flow measurement"** means the flow measured during the minimum time required for the flow-measuring device or method to produce a result in that instance. To the extent practical, instantaneous flow measurements coincide with the collection of any grab samples required for the same sampling period so that together the samples and flow are representative of the discharge during that sampling period.
19. **"Instantaneous Maximum"** when limited in the permit as an instantaneous maximum value, shall mean that no value measured during the reporting period may fall above the stated value.
20. **"Instantaneous Minimum"** an instantaneous minimum value, shall mean that no value measured during the reporting period may fall below the stated value.
21. **"Monthly Average"** means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. For Fecal Coliform Bacteria (FCB) or E-Coli, report the Monthly Average as the geometric mean of all "daily discharges" within a calendar month.
22. **"Monitoring and Reporting"**

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

    A. **MONTHLY:**

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

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

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

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

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

23. **"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.
24. **"POTW"** means Publicly Owned Treatment Works;
25. **"Reduction of CBOD5/BOD5 and TSS in mg/l Formula**"
[(Influent – Effluent) / Influent] x 100
26. **"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.
27. **"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.
28. **"7-Day Average"** Also known as "average weekly" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. The 7-Day Average for Fecal Coliform Bacteria (FCB) or E-Coli is the geometric mean of the "daily discharges" of all effluent samples collected during a calendar week in colonies per 100 ml.

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

Final Fact Sheet

This Fact Sheet is for information and justification of the permit limits only. Please note that it is not enforceable. This permitting decision is for the renewal of 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:

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4. PERMIT ACTIVITY

Previous Permit Effective Date:	February 1, 2013
Previous Permit Expiration Date:	January 31, 2018

The permittee submitted a permit renewal application on July 31, 2017, with all additional information submitted by August 22, 2017. The discharge permit is reissued for a 5-year term in accordance with regulations promulgated at 40 CFR Part 122.46(a).

The above permit was submitted for public comment on May 23, 2018. The public comment period ended on June 22, 2018. The Arkansas Department of Environmental Quality

(hereinafter "ADEQ") received several comments from the permittee in a letter dated June 20, 2018. No other party submitted comments on the draft permit.

Based on the changes resulting from the comments, the Department has determined that the permit must be sent back to public notice. **Only those portions of the permit which were commented upon during the first public comment period are open for comment at this time.**

Comment 1: Section 11.A of the Fact Sheet states that the concentration limits for Outfall 001 are not changing. However, the water-quality based NH_3-N concentration limits for the months of May – October have decreased due to an increase in the flow rate. These new limits may not be consistently met based on DMR data. Therefore, the permittee is requesting a three-year schedule of compliance for the new limits.

Response 1: In accordance with CAO LIS 13-125-001, the permittee must achieve compliance with the final limits by March 31, 2019. Part of the reason for the issuance of the referenced CAO was due to the facility's inability to meet the NH_3-N limits in the previous permit. Installation of a new/modified WWTP was proposed by the permittee to remedy the exceedances of the permit limits, including those for NH_3-N. The design calculations stated that the NH_3-N from the final MBBR will be less than 1.5 mg/l, well under the proposed limits. Also, the Non-Compliance Report submitted for exceedances which occurred in April 2018 stated that wastewater excursions will be remedied with the execution of the new WWTP.

Exceedances of the NH_3-N limits are covered under CAO LIS 13-125-001 until the final compliance date of March 31, 2019.

Therefore, a schedule of compliance for the more stringent permit limits is not warranted and will not be granted as it would conflict with the existing CAO.

Comment 2: The hexavalent chromium limits for Outfall 001 include concentration limits. The ELGs for hexavalent chromium only include mass based limits and represent the limits placed on other refineries with the same production to ensure a level playing field nationally. The permittee understands that the calculated mass water quality limits for the months of May – October were more stringent than the mass technology based limits and that the mass technology based limits for the months of November through May (*sic*) were more stringent than the calculated water quality based limits. However, the permittee does not agree that concentration limits should be placed in the final permit. If there is no reasonable potential for a water quality criteria exceedance from the facility effluent, the permittee requests that the water quality based concentration limits be removed from the permit.

Response 2: The renewal permit issued in 2012 and the draft permit did not take the effluent data into account since Hexavalent Chromium must be in the permit based on the applicable ELGs. Failure to take the effluent data into account was a technical mistake since concentration limits are not required by a regulation so long as the water quality of the

receiving stream is protected. Therefore, concentration limits for Hexavalent Chromium have been replaced with monitoring and reporting requirements.

The water quality of the receiving stream is not at risk since the effluent does not demonstrate reasonable potential for exceedances of the Hexavalent Chromium water quality standards. During the time frame of July 2012 through July 2017, Hexavalent Chromium was only detected a total of three times in the monthly samples with the highest result reported as 2.25 µg/l.

It is understood that the EPA recommends concentration limits with mass limits if the facility is discharging into a small stream as this permittee does (Section 5.7.1 of the *Technical Support Document*) in order to protect the water quality of the receiving stream. It is also understood that one of the reasons in the *US EPA NPDES Permit Writers' Manual* for including concentration limits with mass limits is so that the permittee cannot increase its effluent concentrations above water quality standards while maintaining compliance with the mass limits. However, neither document takes into account that a parameter may be included in a permit solely due to an ELG and not based on reasonable potential as is the case with this permit.

Comment 3: The sources listed in Part IA for Outfall 001 should contain contaminated stormwater to be consistent with the Fact Sheet and permit application.

Response 3: Contaminated stormwater was accidentally omitted from the effluent description in Part IA of the permit for Outfall 001. It has been added to the permit.

Comment 4: The permittee requested that the monitoring frequency reduction (Part II.4 of the current permit) be placed back in the permit. The permittee recognizes that there were compliance issued during the previous permit cycle but would like to have the option later in the new permit cycle for a frequency reduction if the new treatment system performs as anticipated.

Response 4: The monitoring frequency condition to which the comment is referring is no longer placed in permits. Inclusion of the condition would allow for modification of the permit without public notice. Less frequent monitoring is not one of the changes that may qualify as a minor modification under 40 CFR 122.63.

Comment 5: Part II.12.F provides for monitoring frequency reduction for WET testing upon successful completion of the first four quarters or first 12 consecutive months of the current permit term of testing. The current permit expired January 31, 2018. The permittee resumed quarterly WET testing after the current permit expired. Two quarterly WET tests have been performed with no failures. MOP would like to utilize the two WET tests in consideration of future monitoring frequency reduction. MOP requests that the following language be added to the permit:

The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing (in accordance with Item 1.a) after the

expiration date of the previous permit, for one or both species, provided that all of the following conditions are met:

i. The issuance of the renewed permit was not delayed by any fault of the permittee; and

ii. No lethal effects are demonstrated at or below the critical dilution for the first four consecutive quarters of testing after the expiration date of the previous permit. If any of the above conditions are not met, the permittee may apply for a testing frequency reduction of the first four consecutive quarters of testing (in accordance with Item 1.a) after the renewal permit is issued for one or both test species.

Response 5: Permit language will remain as is in Part II.6.F.i.

WET tests submitted prior to the renewed permit effective date have been conducted using the dilution series in the previous permit (November-April: 2.1, 2.8, 3.8, 5, 6.7% and May-October: 15, 20, 27, 38, 51%). The renewed permit contains new dilution series with increased effluent concentrations (November-April: 5, 7, 10, 13, 17% and May-October: 24, 32, 43, 57, 76%). Therefore, WET tests submitted before the renewed permit effective date will not be considered in determining whether to grant a monitoring frequency reduction during the renewed permit term. The permittee will be required to submit four quarterly tests under the new dilution series for consideration of monitoring frequency reduction.

Comment 6: The type of treatment system for Outfall 001 is not consistent with the permit application. The permittee requests that the treatment system description be changed to the following: surge tanks, API separator, dissolved air flotation, aeration tank, settling ponds, and DO tower.

Response 6: The treatment description will be updated as requested.

DOCUMENT ABBREVIATIONS

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

APC&EC - Arkansas Pollution Control and Ecology Commission
BAT - best available technology economically achievable
BCT - best conventional pollutant control technology
BMP - best management practice
BOD_5 - five-day biochemical oxygen demand
BPJ - best professional judgment
BPT - best practicable control technology currently available
$CBOD_5$ - carbonaceous biochemical oxygen demand
CD - critical dilution
CFR - Code of Federal Regulations
cfs - cubic feet per second
COD - chemical oxygen demand
COE - United States Corp of Engineers
CPP - continuing planning process
CWA - Clean Water Act

DMR - discharge monitoring report
DO - dissolved oxygen
ELG - effluent limitation guidelines
EPA - United States Environmental Protection Agency
ESA - Endangered Species Act
FCB - fecal coliform bacteria
gpm - gallons per minute
MGD - million gallons per day
MQL - minimum quantification level
NAICS - North American Industry Classification System
NH_3-N - ammonia nitrogen
NO_3 + NO_2-N - nitrate + nitrite nitrogen
NPDES - National Pollutant Discharge Elimination System
O&G - oil and grease
Reg. 2 - APC&EC Regulation No. 2
Reg. 6 - APC&EC Regulation No. 6
Reg. 8 - APC&EC Regulation No. 8
Reg. 9 - APC&EC Regulation No. 9
RP - reasonable potential
SIC - standard industrial classification
TDS - total dissolved solids
TMDL - total maximum daily load
TP - total phosphorus
TRC - total residual chlorine
TSS - total suspended solids
UAA - use attainability analysis
USF&WS - United States Fish and Wildlife Service
USGS - United States Geological Survey
WET - Whole effluent toxicity
WQMP - water quality management plan
WQS - Water Quality standards
WWTP - wastewater treatment plant

Compliance and Enforcement History:

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

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000591_Compliance%20Review_20170824.pdf

An update to the compliance review may be reviewed using the following web link:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000591_Compliance%20Review%20Update_20180823.pdf

5. SIGNIFICANT CHANGES FROM THE PREVIOUSLY ISSUED PERMIT

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

1. Part III.C.5 of the permit now requires that DMRs be submitted electronically via NetDMR.
2. The monitoring frequency reduction language in Part II.4 of the previous permit has been removed. The permittee has had several compliance issues during the term of the previous permit and will be upgrading the treatment system.
3. The production based tiers at Outfall 001 are being removed. The limits will be set based on a production level of 7,700 barrels per day.
4. Total Recoverable Arsenic monitoring and reporting requirements for the first year of the permit have been included. See Item No. 11.F of this Fact Sheet for additional information.
5. Some permit limits have changed due to changes in the effluent flow and correction of the critical season 7Q10. See Item No. 11 of this Fact Sheet for additional information.

This is a re-drafted permit. Only those items which were commented upon during the first public comment period (May 23, 2018 – June 22, 2018) are open for comment at this time.

1. *The Hexavalent Chromium water-quality based concentration limits have been removed. See Comment 2 and Response 2 in Item No. 4 of this Fact Sheet for additional information.*
2. *The effluent description for Outfall 001 has been corrected to include contaminated stormwater. See Comment 3 and Response 3 in Item No. 4 of this Fact Sheet for additional information.*

6. RECEIVING STREAM SEGMENT AND DISCHARGE LOCATION

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

Outfall 001: Latitude: 33° 22’ 12.6” N; Longitude: 92° 42’ 45.0” W
Outfall 002: Latitude: 33° 21’ 53.1” N; Longitude: 92° 42’ 43.6” W
Outfall 003: Latitude: 33° 21’ 40.6” N; Longitude: 92° 42’ 46.5” W

The receiving waters named:

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

The receiving stream 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.

Outfall 002 and Outfall 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 stream 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.

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

A. 303(d) List

Smackover Creek is on the 2016 303(d) list for DO (Reach #006) and Lead (Reach #006 and #007) in Category 5 due to unknown causes.

DO

The permit contains limits at Outfall 001 which are based on maintaining the DO standard in the receiving stream.

Outfalls 002 and 003 are stormwater only outfalls. No ponds are associated with the stormwater only outfalls. Therefore, DO based discharge limits cannot be accurately calculated for those outfalls.

Lead

Monitoring and reporting requirements for Total Recoverable Lead have been added to the permit at all outfalls.

B. **Applicable Total Maximum Daily Load (TMDL) Reports**

No TMDLs are applicable to this facility.

C. **Endangered Species**

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

The receiving stream is in an area considered sensitive for endangered species by the USF&WS.

D. **Anti-Degradation**

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

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

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

A. Average Flows: The dates listed represent the month in which the highest monthly average flow occurred.

Outfall 001: 0.238 MGD, critical season – May 2017
Outfall 001: 0.297 MGD, primary season, December 2015
Outfall 002: 0.1835 MGD, March 2016
Outfall 003: 0.051 MGD, September 2016

B. Type of Treatment:

Current Outfall 001: surge tanks, API separator, dissolved air flotation, aeration tank, settling ponds, and DO tower
Future Outfall 001: surge tanks, API separators, dissolved air flotation, aeration tank, moving bed biofilm reactor (MBBR), DO tower
Outfalls 002 and 003: none

C. Discharge Description:

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

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 is 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.

9. 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.

10. SOLIDS PRACTICES

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

11. DEVELOPMENT AND BASIS FOR PERMIT CONDITIONS

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

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

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

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

Parameter	Water Quality Based		Technology Based		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
Outfall 001								
$CBOD_5$								
(November – April)	30, (74.31 lb/day)	45, (111.46 lb/day)	(127.99 lb/day)	(250.78 lb/day)	30, (30 lb/day)	45, (45 lb/day)	30, (74.31 lb/day)	45, (111.46 lb/day)
(May – October)	12, (23.82 lb/day)	18, (35.73 lb/day)	(127.99 lb/day)	(250.78 lb/day)	12, (12 lb/day)	18, (18 lb/day)	12, (23.82 lb/day)	18, (35.73 lb/day)
TSS	N/A	N/A	112.2 lb/day	175.14 lb/day	112.2 lb/day	175.14 lb/day	112.2 lb/day	175.14 lb/day
NH_3-N								
(November – April)	15, (37.15 lb/day)	22.5, (55.73 lb/day)	(50.69 lb/day)	(110.72 lb/day)	15, (15 lb/day)	22.5, (22.5 lb/day)	15, (37.15 lb/day)	22.5, (55.73 lb/day)
(May – October)	4.2, (8.34 lb/day)	9.4, (18.66 lb/day)	(50.69 lb/day)	(110.72 lb/day)	6.26, (6.26 lb/day)	15, (15 lb/day)	4.2, (8.34 lb/day)	9.4, (18.66 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	10.0	15.0	(42.03 lb/day)	(79.94 lb/day)	10, (42.03 lb/day)	15, (79.94 lb/day)	10.0, (42.03 lb/day)	15.0, (79.94 lb/day)
COD	N/A	N/A	925.41 lb/day	1784.11 lb/day	925.41 lb/day	1784.11l b/day	925.41 lb/day	1784.11l b/day
Sulfides	N/A	N/A	0.71 lb/day	1.57 lb/day	0.71 lb/day	1.57 lb/day	0.71 lb/day	1.57 lb/day
Phenolic Compounds	N/A	N/A	0.608 lb/day	2.4142 lb/day	0.608 lb/day	2.4142 lb/day	0.608 lb/day	2.4142 lb/day
Total Chromium	N/A	N/A	0.7123 lb/day	20.393 lb/day	0.7123 lb/day	20.393 lb/day	0.7123 lb/day	20.393 lb/day
Hexavalent Chromium, Dissolved								

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)	(0.153 lb/day)	(0.306 lb/day)	Report µg/l, (0.0618 lb/day)	Report µg/l, (0.1369 lb/day)	131.99 µg/l, (0.0618 lb/day)	264.83 µg/l, (0.1369 lb/day)	Report µg/l, (0.0618 lb/day)	Report µg/l, (0.1369 lb/day)
(May – October)	(0.038 lb/day)	(0.077 lb/day)	Report µg/l, (0.0618 lb/day)	Report µg/l, (0.1369 lb/day)	25.07 µg/l, (0.031 lb/day)	50.31 µg/l, (0.063 lb/day)	Report µg/l, (0.038 lb/day)	Report µg/l, (0.077 lb/day)
Total Recoverable Lead	N/A	N/A	Report µg/l	Report µg/l	N/A	N/A	Report µg/l	Report µg/l
Total Recoverable Arsenic[1]	N/A	N/A	Report µg/l	Report µg/l	N/A	N/A	Report µg/l	Report µg/l
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.	
OUTFALLS 002 and 003								
TOC	N/A	N/A	N/A	110	N/A	110	N/A	110
O & G	N/A[2]	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
Total Recoverable Lead	N/A	N/A	Report µg/l	Report µg/l	N/A	N/A	Report µg/l	Report µg/l
pH	6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.		6.0-9.0 s.u.	

[1] Monitoring and reporting of Total Recoverable Arsenic is only required for the first four quarters of the permit.

[2] See LIS #99-267 (APCEC Docket #99-014-P).

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

Parameter	Water Quality or Technology	Justification
OUTFALL 001		
$CBOD_5$	Water Quality	MultiSMP Model dated December 6, 2017, CWA § 402(o), and previous permit
TSS	Technology	40 CFR 419.44(a), 40 CFR 122.44(l), and previous permit
NH_3-N	Water Quality	Reg. 2.512, MultiSMP Model dated December 6, 2017, CWA § 402(o), and previous permit
DO	Water Quality	Reg. 2.505, MultiSMP Model dated December 6, 2017, CWA § 402(o), and previous permit

Parameter	Water Quality or Technology	Justification
O & G	Water Quality	concentration - Reg. 2.510, CWA § 402(o), and previous permit
	Technology	mass - 40 CFR 419.44(a), 40 CFR 122.44(l), and previous permit
COD	Technology	40 CFR 419.43(a), 40 CFR 122.44(l), and previous permit
Sulfides	Technology	40 CFR 419.43(a), 40 CFR 122.44(l), and previous permit
Phenolic Compounds	Technology	40 CFR 419.43(c)(1)(i), 40 CFR 122.44(l), and previous permit
Total Chromium	Technology	40 CFR 419.43(c)(1)(i), 40 CFR 122.44(l), and previous permit
Hexavalent Chromium, Dissolved	Water Quality	Reg. 2.508, mass May – October, CWA § 402(o), and previous permit
	Technology	40 CFR 419.43(c)(1)(i), mass November – April, 40 CFR 122.44(l), and previous permit
Total Recoverable Lead	Technology	2016 303(d) list
Total Recoverable Arsenic	Technology	Reg. 2.409 and "EPA Freshwater Screening Benchmarks" used for Ecological Risk Assessment
pH	Water Quality	Reg. 2.504, CWA § 402(o), and previous permit
OUTFALLS 002 and 003		
TOC	Technology	40 CFR 419.43(f)(1), 40 CFR 122.44(l), and previous permit
O & G	Technology	40 CFR 419.44(e)(1), 40 CFR 122.44(l), and previous permit
TSS	Technology	40 CFR 122.44(l) and previous permit
Total Recoverable Lead	Technology	2016 303(d) list
pH	Water Quality	Reg. 2.504, CWA § 402(o), and previous permit

Outfall 001

With the exception of Hexavalent Chromium during the months of May - October, water quality based mass limits have increased due to changes in the highest monthly average flows from Outfall 001 during the critical season as well as the primary season. With the exception of NH_3-N (May – October), the concentration limits are remaining unchanged.

See Item #11.F of this Fact Sheet for calculation of the water-quality based Hexavalent Chromium limits. The water-quality based concentration limits for this parameter have been removed from the permit. See Item No. 4, Comment 2, and Response 2 of this Fact Sheet for additional information.

The more stringent NH_3-N concentration limits for the months of May – October are based on the updated water-quality model. A new model was necessary due to increased effluent flow. A copy of the model may be found at the following link:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000591_WQMP%20Summary_20171206.pdf

Monitoring and reporting requirements for Total Recoverable Arsenic (Outfall 001) and Total Recoverable Lead (all outfalls) have been added to the permit. See Item No. 11.F of this Fact Sheet for information concerning Total Recoverable Arsenic. See Item No. 7.A of this Fact Sheet for information concerning Total Recoverable Lead.

Outfalls 002 and 003

Total Recoverable Lead monitoring and reporting requirements have been added to this permit based on the 2016 303(d) list.

The permittee is still required to monitor and report the levels of TSS in the effluent from Outfall 002 and Outfall 003. During a review of the DMR data submitted during the term of the previous permit, the TSS levels often exceeded the benchmark value of 100 mg/l contained in the general permit for stormwater runoff associated with industrial activity (ARR000000).

The Department has added Condition No. 7 to Part II of the permit requiring the permittee to investigate the cause and/or source of the elevated pollutant levels, review the BMPs, and determine and document a corrective action plan to address the benchmark exceedance in the event that the TSS level is above 100 mg/l. Failure to reduce the TSS levels in the effluent from these outfalls may result in TSS or turbidity limits being included in the permit at the time of the next renewal.

The limits for TOC and O & G are based on the requirements of the applicable ELG. The permittee has been in compliance with these limits, therefore, the requirements of 40 CFR 419.43(f)(2) and 419.44(e)(2) do not apply to these outfalls.

B. **Anti-backsliding**

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

Water-quality based mass limits at Outfall 001 have increased due to a higher monthly average flow from the past two years. These changes do not violate the anti-backsliding standards of CWA § 402(o) since they are based on new information.

The water-quality based concentration limits for Hexavalent Chromium have been removed from the permit. See Comment 2 and Response 2 in Item No. 4 of this Fact Sheet for additional information.

C. **Limits Calculations**

1. Mass limits:

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

Outfall 001

The calculation of the loadings (lbs per day) uses an average flow of 0.297 MGD (primary season of November – April) and an average flow of 0.238 MGD (critical season of May – October) and the following equation for $CBOD_5$, NH_3-N, and Dissolved Hexavalent Chromium (May – October):

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

The loadings for TSS, O & G, COD, Sulfides, Phenolic Compounds, Total Chromium, and Dissolved Hexavalent Chromium (November – April) are based on the applicable ELG. See Item No. 11.E of this Fact Sheet for additional information.

Outfalls 002 and 003

The permit does not contain mass limits for Outfalls 002 and 003 since these are stormwater only outfalls with no treatment. Mass limits are not practical since the flow can be highly variable.

2. Daily Maximum Limits:

Outfall 001

The daily maximum limits for $CBOD_5$ and NH_3-N 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

The daily maximum limits for TSS, O & G (mass only), COD, Sulfides, Phenolic Compounds, Total Chromium, and Dissolved Hexavalent Chromium (mass only for the months of November – April) are based on the applicable ELG. See Item No. 11.E of this Fact Sheet for additional information.

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

The daily maximum mass limit during the months of May – October for Dissolved Hexavalent Chromium was calculated in accordance with the procedures set forth in Appendix D of the CPP. See Item 11.F of this Fact Sheet for additional information.

Outfalls 002 and 003

The daily maximum limits are based on the applicable ELG.

D. 208 Plan (Water Quality Management Plan)

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

1. The facility flow is changing from 0.12 MGD to 0.238 MGD for the months of May – October.
2. The facility flow is changing from 0.12 MGD to 0.297 MGD for the months of November – April.
3. The monthly average NH3-N limit at Outfall 001 for the months of May – October is changing from 6.26 mg/l to 4.20 mg/l.

E. 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.

The production data submitted with the reapplication was found to agree with past production data upon which prior permits have been based. The present technology-based limits and monitoring requirements are continued based on the previous discharge permit, 40 CFR Part 419, and 40 CFR Part 122.44(l).

Calculation of the technology-based limits may be found in the Fact Sheet for the NPDES permit which was issued to this facility with an effective date of February 1, 2013. A link to this permit has been provided below:

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/IssuedPermits/AR0000591_Final%20Renewal_20121214.pdf

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
Critical Season Flows		
Discharge Flow = Q	0.238 MGD = 0.37 cfs	May 2017 DMR
7Q10 Background Flow	0.34 cfs	U.S.G.S.
City of Smackover Flow	0.0773 cfs	September 2015 DMR[2]
LTA Background Flow	1.1573 cfs	Calculated[1]
Primary Season Flows		
Discharge Flow = Q	0.297 MGD = 0.459 cfs	December 2015 DMR
7Q10 Background Flow	4.55 cfs	U.S.G.S.
City of Smackover Flow	0.239 cfs	November 2016 DMR
LTA Background Flow	13.889 cfs	Calculated[1]
Other Data		
TSS	5.50 mg/l	CPP
Hardness as CaCo3	31.00 mg/l	CPP
pH	6.34 s.u.	OUA0027, Sept. 2016 – August 2017

[1]LTA = (3 * 7Q10) + City of Smackover flow. Section 4.6.2.2.a of the Technical Support Document.
[2]Lowest monthly average flow from two years prior to submittal of renewal application.

The following pollutants were reported above detection levels:

Pollutant	Concentration Reported, µg/l	MQL, µg/l
Total Recoverable Arsenic	4.41	0.5

Pollutant	Concentration Reported, µg/l	MQL, µg/l
Total Recoverable Copper	1.12	0.5
Total Recoverable Mercury	0.00837	0.005
Total Recoverable Nickel	1.4	0.5
Total Recoverable Selenium	1.29	5
Total Phenols	11.1	5

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

Primary Season

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000591_Primary%20Season%20PPS_20170914.pdf

Critical Season

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000591_Critical%20Season%20PPS_20170914.pdf

1. **Aquatic Toxicity Evaluation**

   a. Acute Criteria Evaluation

Pollutant	Concentration Reported (C_e) µg/l	C_e x 2.13[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
			Acute, µg/l	Acute, µg/l	
Critical Season					
Total Recoverable Copper	1.12	2.39	1.74	14.79	No
Total Recoverable Mercury	0.00837	0.0178	0.0130	6.70	No
Total Recoverable Nickel	1.4	2.98	2.17	1061.45	No
Total Recoverable Selenium	1.29	2.75	2.00	20	No
Primary Season					

Pollutant	Concentration Reported (C_e) µg/l	C_e x 2.13[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
			Acute, µg/l	Acute, µg/l	
Total Recoverable Copper	1.12	2.39	0.54	14.79	No
Total Recoverable Mercury	0.00837	0.0178	0.0040	6.70	No
Total Recoverable Nickel	1.4	2.98	0.67	1061.45	No
Total Recoverable Selenium	1.29	2.75	0.62	20	No

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

b. Chronic Criteria Evaluation

Pollutant	Concentration Reported (C_e) µg/l	C_e x 2.13[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
			Chronic, µg/l	Chronic, µg/l	
Critical Season					
Total Recoverable Copper	1.12	2.39	1.36	10.93	No
Total Recoverable Mercury	0.00837	0.0178	0.0101	0.012	No
Total Recoverable Nickel	1.4	2.98	1.70	117.88	No
Total Recoverable Selenium	1.29	2.75	1.56	5.00	No
Primary Season					
Total Recoverable Copper	1.12	2.39	0.30	10.93	No
Total Recoverable Mercury	0.00837	0.0178	0.0022	0.012	No
Total Recoverable Nickel	1.4	2.98	0.37	117.88	No
Total Recoverable Selenium	1.29	2.75	0.34	5.00	No

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

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 listed criteria for Total Recoverable Copper, Total Recoverable Mercury, Total Recoverable Nickel, or Total Recoverable Selenium.

The ELGs which are applicable to this facility includes Dissolved Hexavalent Chromium. Reg. 2.508 contains water-quality based criteria for this parameter. However, the DMR data submitted during the past two years has shown that this parameter is not present in quantifiable amounts. Therefore, water-quality based concentration limits are not required for this parameter. The water-quality based concentration limits must still be calculated and used to calculate mass limits in order to ensure that the technology-based mass limits are not less stringent.

The Hexavalent Chromium concentrations were calculated in the manner described in Appendix D of the CPP and compared to the technology based limitations. The calculations for this parameter may be found using the following links:

Primary Season

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000591_Primary%20Season%20Hexavalent%20Chromium_20170914.pdf

Critical Season

https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/NPDES/PermitInformation/AR0000591_Critical%20Season%20Hexavalent%20Chromium_20170914.pdf

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

Pollutant	Concentration Reported (C_e) µg/l	C_e x 2.13[1]	Instream Waste Concentration (IWC)	Criteria[2]	Reasonable Potential (Yes/No)
Critical Season					
Total Recoverable Arsenic	4.41	9.39	2.27	1.4	Yes
Total Phenols	11.1	23.643	5.71	N/A	N/A
Primary Season					
Total Recoverable Arsenic	4.41	9.39	0.30	1.4	No
Total Phenols	11.1	23.643	0.76	N/A	N/A

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

[2] Adapted from "National Recommended Water Quality Criteria: 2002 – Human Health Criteria Calculation Matrix", EPA. The respective WQC from the noted reference are Consumption of Organism Only values. The values from the reference are for a lifetime risk factor of 10^{-6}. These values have been multiplied by 10 to correspond to human health criteria lifetime risk factor of 10^{-5} as stated in Reg. 2.508.

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

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

12. **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 Season

Qd = average flow = 0.238 MGD = 0.369 cfs
7Q10 = 0.34 cfs
City of Smackover lowest monthly average flow = 0.0773 cfs (September 2015)
Qb = background flow = 0.67 X (0.34 + 0.0773) = 0.280 cfs
CD = (0.369) / (0.369 + 0.280) X 100 = 57%

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 24%, 32%, 43%, 57%, and 76% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 57% effluent based on a 0.34 cfs 7Q10 flow of the receiving stream in addition to the critical season lowest monthly average flow of 0.0773 cfs from the City of Smackover's WWTP.

Primary Season

Qd = average flow = 0.297 MGD = 0.459 cfs
7Q10 = 4.55 cfs
City of Smackover lowest monthly average flow = 0.239 cfs (November 2016)
Qb = Background flow = 0.67 X (4.55 + 0.239) = 3.209 cfs
CD = (0.459) / (0.459 + 3.209) X 100 = 13%

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 5%, 7%, 10%, 13%, and 17% (See the CPP). The low-flow effluent concentration (critical dilution) is defined as 13% effluent based on a 4.55 cfs 7Q10 flow of the receiving stream in addition to the primary season lowest monthly average flow of 0.239 cfs from the City of Smackover's WWTP.

Toxicity tests shall be performed in accordance with protocols described in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", EPA/600/4-91/002, July 1994. 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 APC&EC Regulation No. 6. Increased or intensified toxicity testing may also be required in accordance with Section 308 of the Clean Water Act and Section 8-4-201 of the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

Administrative Records

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

Permit Number:	AR0000591	AFIN:	70-00039	Outfall Number:	001
Date of Review:	9/8/2017	Reviewer:	M. Barnett		
Facility Name:	Martin Operating Partnership				
Primary Season - November - April					
Previous Dilution series:	2.1, 2.8, 3.8, 5, 6.7	Proposed Dilution Series:	5, 7, 10, 13, & 17		
Previous Critical Dilution:	5	Proposed Critical Dilution:	13		
Previous TRE activities:	None				
Frequency recommendation by species					
Pimephales promelas (Fathead minnow):		once per quarter			
Ceriodaphnia dubia (water flea):		once per quarter			

TEST DATA SUMMARY

	Vertebrate (*Pimephales promelas*)		Invertebrate (*Ceriodaphnia dubia*)	
TEST DATE	Lethal	Sub-Lethal	Lethal	Sub-Lethal
	NOEC	NOEC	NOEC	NOEC
12/31/2012	13	13	13	13
3/31/2013	6.7	6.7	6.7	6.7
12/31/2013	6.7	6.7	6.7	6.7
3/31/2014	6.7	5	6.7	6.7
6/30/2014	6.7	6.7	6.7	6.7
4/30/2016	6.7	6.7	6.7	6.7

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	**Vertebrate Sub-lethal**	**Invertebrate Lethal**	**Invertebrate Sub-Lethal**
Min NOEC Observed	6.7	5	6.7	6.7
TU at Min Observed	14.93	20.00	14.93	14.93
Count	6	6	6	6
Failure Count	0	0	0	0
Mean	13.720	14.566	13.720	13.720
Std. Dev.	2.953	3.932	2.953	2.953
CV	0.6	0.6	0.6	0.6
RPMF	2.1	2.1	2.1	2.1
Reasonable Potential	4.075	5.460	4.075	4.075
100/Critical dilution	7.692	7.692	7.692	7.692
Does Reasonable Potential Exist	No	No	No	No

PERMIT ACTION

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

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

Reasonable potential does not exist for either species. Monitoring will be required during the November to April time period.

Permit Number:	AR0000591	AFIN:	70-00039	Outfall Number:	001
Date of Review:	12/18/2017	Reviewer:	M. Barnett		
Facility Name:	Martin Operating Partnership				
Critical Season - May - October					
Previous Dilution series:	15, 20, 27, 38, 51	Proposed Dilution Series:	24, 32, 43, 57, 76		
Previous Critical Dilution:	38	Proposed Critical Dilution:	57		
Previous TRE activities:	None				
Frequency recommendation by species					
Pimephales promelas (Fathead minnow):		once per quarter			
Ceriodaphnia dubia (water flea):		once per quarter			

TEST DATA SUMMARY

	Vertebrate (*Pimephales promelas*)		Invertebrate (*Ceriodaphnia dubia*)	
TEST DATE	Lethal	Sub-Lethal	Lethal	Sub-Lethal
	NOEC	NOEC	NOEC	NOEC
6/30/2013	51	51	51	51
9/30/2013	51	51	51	51
10/31/2014	51	51	51	51
4/30/2015	51	51	51	51
10/31/2015	51	51	38	38
10/31/2016	51	51	51	51
4/30/2017	51	51	51	51
10/31/2017	51	51	51	51

REASONABLE POTENTIAL CALCULATIONS

	Vertebrate Lethal	Vertebrate Sub-lethal	Invertebrate Lethal	Invertebrate Sub-Lethal
Min NOEC Observed	51	51	38	38
TU at Min Observed	1.96	1.96	2.63	2.63
Count	8	8	8	8
Failure Count	0	0	0	0
Mean	1.961	1.961	2.045	2.045
Std. Dev.	0.000	0.000	0.237	0.237
CV	0.6	0.6	0.6	0.6
RPMF	1.9	1.9	1.9	1.9
Reasonable Potential	2.124	2.124	2.850	2.850
100/Critical dilution	1.754	1.754	1.754	1.754
Does Reasonable Potential Exist	Yes	Yes	Yes	Yes

PERMIT ACTION

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

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

Although reasonable potential appears to exist, during the current permit term there have been no lethal or sub-lethal WET test failures below the critical dilution, the determination is an artifact of the revision in critical dilution. The current critical dilution is higher than the highest dilution from the previous dilution series. At this time, there is insufficient evidence to support the inclusion of WET 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.

13. STORMWATER REQUIREMENTS

The federal regulations at 40 CFR 122.26(b)(14) require certain industrial sectors to have NPDES permit coverage for stormwater discharges from the facility. These requirements include the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) to control the quality of stormwater discharges from the facility. This facility was issued stormwater permit coverage under NPDES Tracking number ARR001516. That stormwater permit coverage is for stormwater runoff that does not result from precipitation coming into contact with petroleum refinery property, i.e., where the refining operations are occurring.

14. SAMPLE TYPE AND FREQUENCY

Requirements for sample type and sampling frequency have been based on the current discharge permit.

Monitoring and reporting for Total Recoverable Arsenic is only required once per quarter for the first four quarters of the permit based on the CPP. The sample type is based on the sample types for other parameters at Outfall 001.

Total Recoverable Lead monitoring frequency has been set at once per quarter since the purpose of including this parameter is to gather information to aid in preparing a TMDL. The sample type is based on the sample types for other parameters at Outfall 001.

The Total Recoverable Lead monitoring frequency has been set at once per year from Outfalls 002 and 003 since these are stormwater only outfalls where the Lead requirements are only being added due to the inclusion of the receiving stream on the 2016 303(d) list. The sample type is based on the sample type for other parameters at these outfalls.

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
Outfall 001				
Flow	continuous	record	continuous	record
$CBOD_5$				
(November – April)	twice/week	24-hr composite	twice/week	composite
(May – October)	twice/week	24-hr composite	twice/week	composite

Parameter	Previous Permit		Final Permit	
	Frequency of Sample	Sample Type	Frequency of Sample	Sample Type
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
Total Recoverable Lead	N/A	N/A	once/quarter	composite
Total Recoverable Arsenic	N/A	N/A	once/quarter	composite
pH	once/week	grab	once/week	grab
Outfalls 002 and 003				
Flow	once/quarter	estimate	once/quarter	estimate
TOC	once/quarter	grab	once/quarter	grab
O & G	once/quarter	grab	once/quarter	grab
TSS	once/quarter	grab	once/quarter	grab
Total Recoverable Lead	N/A	N/A	once/year	grab
pH	once/quarter	grab	once/quarter	grab

15. PERMIT COMPLIANCE SCHEDULE

A Schedule of Compliance has not been included in this permit.

16. MONITORING AND REPORTING

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

17. SOURCES

The following sources were used to draft the permit:

A. Application No. AR0000591 received July 31, 2017, with all additional information received by August 22, 2017.
B. Arkansas Water Quality Management Plan (WQMP).
C. APC&EC Regulation No. 2.
D. APC&EC Regulation No. 3.
E. APC&EC Regulation No. 6 which incorporates by reference certain federal regulations included in Title 40 of the Code of Federal Regulations at Reg. 6.104.
F. 40 CFR Parts 122 and 125.
G. 40 CFR Part 419.
H. Discharge permit file AR0000591.
I. Discharge Monitoring Reports (DMRs).
J. "2016 Integrated Water Quality Monitoring and Assessment Report", ADEQ.
K. "2016 List of Impaired Waterbodies (303(d) List)", ADEQ, July 2017.
L. "Low-Flow Characteristics and Regionalization of Low-Flow Characteristics for Selected Streams in Arkansas", U.S. Dept. of the Interior, U.S. Geological Survey, Scientific Investigations Report 2008-5065.
M. Continuing Planning Process (CPP).
N. Technical Support Document For Water Quality-based Toxic Control.
O. Inspection Report dated May 4, 2016.
P. Compliance Review Memo from Bailey Taylor to Loretta Carstens, P.E. dated August 24, 2017.
Q. MultiSMP Model dated December 6, 2017.
R. City of Smackover flow data, NPDES Permit No. AR0021440.
S. LIS #99-267 (APCEC Docket #99-014-P).
T. Letter from Randall Whitmore to Loretta Carstens, P.E. dated June 20, 2018.

18. PUBLIC NOTICE

The public notice of the draft permit was published for public comment on May 23, 2018. The last day of the comment period was thirty (30) days after the publication date.

Comments from the permittee were received in a timely manner. Based on the ensuing changes, the permit was redrafted for public comment on November 4, 2018. No public comments were received on the second draft permit.

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

19. **POINT OF CONTACT**

For additional information, contact:

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