

**Arkansas Department of Environmental Quality
Water Quality Management Plan Update Summary Sheet**

Date: 10/28/2008

New Permit
 Amended Permit

Type of Discharge: Industrial Wastewater

Facility Name: Cooper Tire & Rubber Company

Permit No.: AR0038822

Design Flow Rate (MGD): 10.3

Receiving Stream: unnamed tributary of Nix Creek, thence to Nix Creek, thence to Day's Creek, thence to the Sulfur River, thence to the Red River

HUC + Reach Code: 11140302+003

Planning Segment: 1B

County: Miller

Proposed Effluent Limits in mg/L (BOD5/DO):

May – October:¹ 50.0/3.0
November – April: 40.0/6.0

Justification (Sag = Minimum Modeled Value ≠ Difference in Value):

Reach No.	Length (miles)	DO _C (mg/L)	Sag _C (mg/L)	Distance to Sag _C (miles)	DO _P (mg/l)	Sag _P (mg/L)	Distance to Sag _P (miles)
1	3	2.0	2.12	1.45	5.0	5.07	2.25

Current Effluent Limits in mg/L (BOD5/DO): Year – Round: Report/NA

Outfall Location (Lat/Long): 33° 25' 7.3"; 94° 00' 14.6"

Remarks: This proposed permit renewal is for this existing industrial stormwater discharger. Only stormwater and air conditioner condensate may be discharged pursuant to this draft permit.

The “design flow” is based on the highest monthly average flow during the last two years. The previous permit has monthly average COD limits (50 mg/L) and “Report” requirements for BOD, so it was not in the WQMP. The proposed renewal replaces COD with BOD limits, so it will be added to the WQMP with this renewal.

¹ According to APCEC Regulation No. 2, the Critical Season is from mid-May to mid-September.

Model Input Data

Facility Name: Cooper Tire

Permit Number: AR0038822

Lat./Long. 33° 25' 7.3" 94° 00' 14.6"

W.S. Drainage Area (mi²) < 10 mi² Ecoregion: GULF COASTAL

	Critical Season (May-Oct.)	Primary Season (Nov.-Apr.)
D.O. Standard (mg/L)	2.0	5.0
Temp. Standard (°C)	30	22
Q stream (cfs)	0 7Q10	0 7Q10
Velocity stream (fps)	0.456	0.456
Depth stream (ft)	1.317	1.317

Q_{DESIGN} (MGD): 10.3 Planning Seg. 1B

Receiving Stream: unnamed trib of Nix creek → Days Creek → Sulfur River → Red River

HUC + reach code: ~~11140201~~ + 014 Permit type: MINOR Industrial

Other Facilities 0302 + 003

<u>Name</u>	<u>Permit#</u>	<u>Coord.</u>	<u>Q (mgd)</u>	<u>limits</u>
1.				
2.				
3.				
4.				

Engineer: Shane Byrum
Date: 10/27/08

Input Model Coefficients

Reach 1

Coefficient – at 20° C	Input value	Justification
BOD _{ult.} /BOD ₅	2.3	EPA
K _d (1/day)	0.3	MOA
K _n (1/day)	0.3	MOA
SOD (g/m ² /day)	1.5	MOA
K _a (1/day)	7.67	Owens - Gibbs

Reach 2

Coefficient – at 20° C	Input value	Justification
BOD _{ult.} /BOD ₅		
K _d (1/day)		
K _n (1/day)		
SOD (g/m ² /day)		
K _a (1/day)		

Reach 3

Coefficient – at 20° C	Input value	Justification
BOD _{ult.} /BOD ₅		
K _d (1/day)		
K _n (1/day)		
SOD (g/m ² /day)		
K _a (1/day)		

Engineer: Shane Byrum
Date: 10/27/08

BVC

```

*****
*                               SIMPLIFIED METHOD PROGRAM                               *
*                               COMPLETE INPUT LISTING                               *
*****

```

38822-C.SMP

--*-*-* Run Information *-*-*-*-*

```

Name of receiving stream ----- unnamed ditch
Number of discharges ----- 1
Number of reaches ----- 1
Reaeration type ----- Manually specified
Run title ----- Coopertire_Critical

```

--*-*-* Upstream Parameters *-*-*-*-*

Parameter	Value	Comment
Flow (cfs)	0.000	7Q10
Temperature (°C)	30.000	Reg 2 standard
Dissolved Oxygen (mg/l)	6.000	80% sat @30C
5-Day BOD (mg/l)	1.480	avg @RED0004A
Ult. CBOD / 5-Day BOD	2.300	epa guidance
pH (su)	6.960	avg @RED0004A
Ammonia (mg/l)	0.100	avg @RED0004A
Alkalinity (mg/l)	-0.000	

--*-*-* Effluent Parameters *-*-*-*-*

Number of Discharges = 1

For Discharge Number 1 (Cooper Tire)

Parameter	Value	Comment
Flow (MGD)	10.300	hiQ apr06-apr08
Temperature (°C)	30.000	Reg 2 standard
Dissolved Oxygen (mg/l)	3.000	Permit Limit
5-Day BOD (mg/l)	45.000	Permit Limit
Ult. CBOD / 5-Day BOD	2.300	epa guidance
pH (su)	7.000	avg apr06-apr08
Ammonia (mg/l)	-0.000	
Alkalinity (mg/l)	-0.000	
Beginning of Reach Number	1.000	

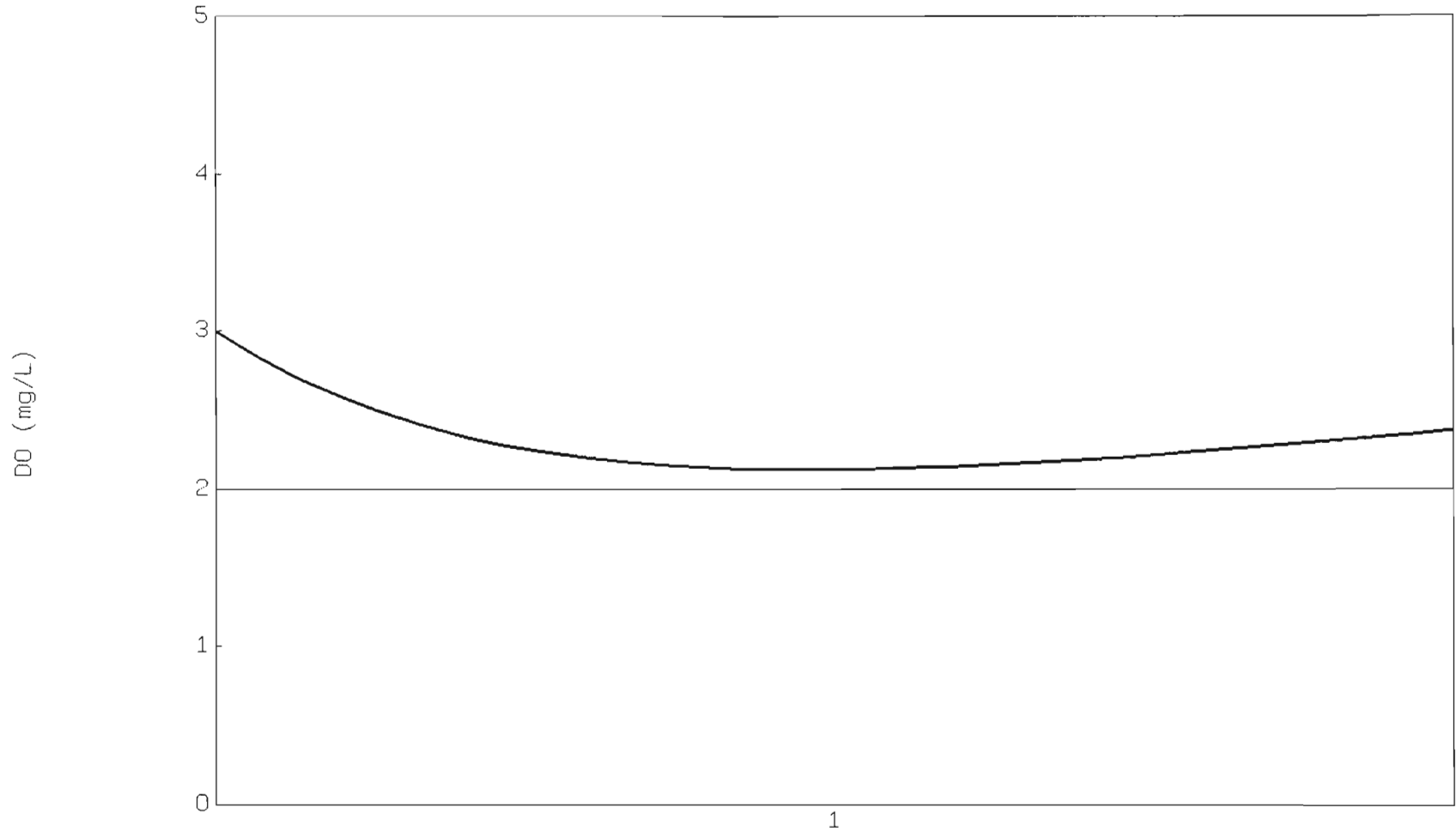
--*-*-* Reach Information *-*-*-*-*

Number of Reaches = 1
Reaeration Specified Directly

For Reach Number 1

Parameter	Value	Comment
Length (mile)	3.000	
Velocity (fps)	0.456	Texas fastest
Slope (ft/mile)	-0.000	
Average Depth (ft)	1.317	Texas fastest
Temperature (°C)	30.000	Calculated

Dissolved Oxygen Profile
Coopertire_Critical



Max unionized ammonia = 0.0000 mg/L

BVC

```

*****
*                               SIMPLIFIED METHOD PROGRAM                               *
*                               COMPLETE INPUT LISTING                               *
*****

```

38822 - P. SMP

--*-*-* Run Information *-*-*-*-*

```

Name of receiving stream ----- unnamed ditch
Number of discharges ----- 1
Number of reaches ----- 1
Reaeration type ----- Manually specified
Run title ----- CooperTire_Primary

```

--*-*-* Upstream Parameters *-*-*-*-*

Parameter	Value	Comment
Flow (cfs)	0.000	7Q10
Temperature (°C)	22.000	Reg 2
Dissolved Oxygen (mg/l)	6.960	80% sat @22C
5-Day BOD (mg/l)	1.480	avg @RED0004A
Ult. CBOD / 5-Day BOD	2.300	epa guidance
pH (su)	6.960	avg @RED0004A
Ammonia (mg/l)	0.100	avg @RED0004A
Alkalinity (mg/l)	-0.000	

--*-*-* Effluent Parameters *-*-*-*-*

Number of Discharges = 1

For Discharge Number 1 (Cooper Tire)

Parameter	Value	Comment
Flow (MGD)	10.300	hiQ apr06-apr08
Temperature (°C)	22.000	Reg 2
Dissolved Oxygen (mg/l)	6.000	Permit Limit
5-Day BOD (mg/l)	35.000	Permit Limit
Ult. CBOD / 5-Day BOD	2.300	epa guidance
pH (su)	7.000	avg apr06-apr08
Ammonia (mg/l)	-0.000	
Alkalinity (mg/l)	-0.000	
Beginning of Reach Number	1.000	

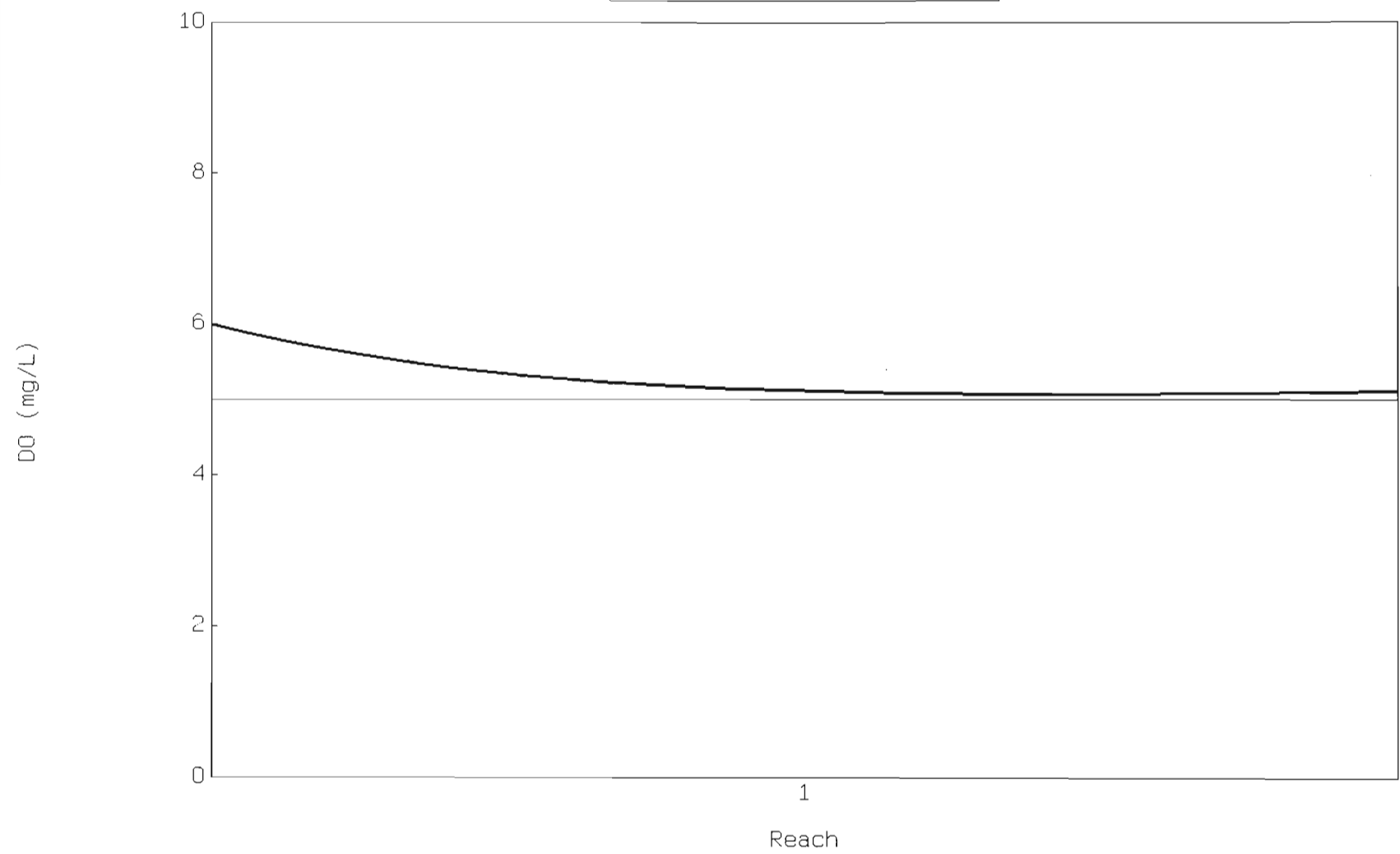
--*-*-* Reach Information *-*-*-*-*

Number of Reaches = 1
Reaeration Specified Directly

For Reach Number 1

Parameter	Value	Comment
Length (mile)	3.000	
Velocity (fps)	0.456	
Slope (ft/mile)	-0.000	
Average Depth (ft)	1.317	
Temperature (°C)	22.000	Calculated

Dissolved Oxygen Profile
CooperTire_Primary



Max unionized ammonia = 0.0000 mg/L