

ATTACHMENT 1

EPA - REGION 6 NPDES PERMIT CERTIFICATION CHECKLIST

In accordance with the MOA established between the State of Arkansas and the United States Environmental Protection Agency, Region 6, the state submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review.

Major Minor POTW Private Domestic non-POTW

(Do NOT complete checklist for General Permits)

Facility Name Cooper Tire and Rubber Company

SIC Code 3011 Type Automobile Tire Manufacturing

Federal Permit No. _____ State Permit No. AR0038822

Segment No. 1B Basin Red River Basin Receiving Water unnamed tributary to Nix Creek thence to Nix Creek thence to Days Creek thence to Sulfur River thence to the Red River

Permit Action: New Renewal/Reissuance w/changes
Renewal/Reissuance w/no changes in permit & WQS
Modification/Amendment , type: _____
If this is a permit modification, proceed directly to No. 25.

Answer the following with **Yes, No, or N/A**:

1. Does this facility discharge to a 303(d) listed waterbody segment? No
2. If so, does the facility discharge any of the pollutant(s) of concern identified in the 303(d) listing? N/A
3. Is this a new facility or an expansion of an existing facility? No
4. For an existing facility, if any limits have been removed or are less stringent than those in the previous permit, is it in accordance with the anti-backsliding regulations? Yes
5. Is this permit consistent with the approved WQMP? Yes
6. Does the facility discharge to a waterbody segment which has a finalized TMDL? No
7. If so, does the permit implement the TMDL consistent with the WLAs? N/A
8. Does the fact sheet document the rationale for the inclusion/omission of permit conditions for each 303(d) listed pollutant of concern or TMDL pollutant? N/A
9. Does this permit include provisions for effluent trading? No
10. In Texas, has a priority watershed of critical concern been identified by the U.S. Fish and Wildlife Service for this segment? N/A
11. In Arkansas, if this facility used chlorine for disinfection of the effluent, does the permit contain TRC limits? N/A

12. Does this permit authorize ammonia discharges > 4.0 mg/l at the edge of the mixing zone? No
13. Does this permit require testing for Whole Effluent Toxicity in accordance with the state's standard practices and implementation plan? Yes
14. If this facility has completed and implemented a Toxicity Reduction Evaluation (TRE), has any subsequent toxicity been identified? No
15. Does this permit include a bypass of any treatment unit or authorize overflows in the system? No
16. If a POTW is ≥ 5 MGD, does it have an approved Pretreatment Program? N/A
17. Since the last permit issuance, has the POTW had a new Pretreatment Program approved or a Pretreatment Program modification approved? N/A
18. Does this permit contain authorization for wet weather related peak-flow discharges? Yes
19. Are there known or potential interstate water issues associated with this permit? _____
20. Does this permit contain specific issues on which EPA and the state are not in agreement regarding the permitting approach? No
21. Does this permit propose to grant a variance request (*WQS, FDF, etc.*) or does it incorporate a proposed or final approval of a variance request? No
22. Is this facility subject to a national effluent limitations guideline? No
If yes, specify _____
23. Does this permit contain "first-time" implementation of a new federal guideline, policy, regulation, etc.? No If yes, specify: _____
24. Is there known or potential third-party interest/environmental concern regarding this permit action? No
25. Does this permit incorporate any exceptions to the standards or regulations? No
26. If this is a permit modification/amendment, briefly describe the changes. This is a renewal. Proposed changes to the permit include:
 - a. COD limits were replaced with BOD5 limits.
 - b. Facility and outfall coordinates were revised to more accurate values.
 - c. All limits are now expressed to the nearest tenth.
 - d. Dissolved oxygen limits were added.
 - e. Compliance schedule for DO, Zn, and Hg were added.
 - f. Flow sample type and frequency was revised.
 - g. Seasonal limits for zinc were changed to year-round limits.
 - h. Air conditioner condensate was added as a source of permitted wastewater.

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Commission and/or made available to the Department/Commission, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name Shane Byrum

Title Permit Engineer

Signature 

Date 10/27/2008

Comments on ADEQ model for Cooper Tire

1. **Upstream and effluent temperature.** ADEQ's model uses upstream and effluent temperatures of 30°C for critical conditions and 22°C for primary conditions based on water quality criteria in Regulation No. 2. Previous models for stormwater discharges reviewed and accepted by ADEQ and EPA have used a temperature of 25°C for critical conditions and 20°C for primary conditions. Since Cooper Tire's discharge is stormwater dependent, it is assumed that the temperature of the discharge and receiving stream will be significantly less than the water quality criteria. This assumption is based on the fact that the temperature of rainwater reaching the ground is expected to be similar to the dewpoint temperature. Based on data gathered from the Southern Regional Climate Center web site, the highest normal monthly dew point temperature for Shreveport, LA, is 71.9°F (22.2°C). (Shreveport was the closest station to Cooper Tire that tracked dew point temperatures.) Assuming that runoff will warm slightly due to contact with pavement and roofs, a model temperature of 25°C for stormwater discharges during critical conditions seems conservative and reasonable.

Similarly, during the primary season (November – April), the highest normal monthly dew point temperature for the same station is 53.8°F (12.1°C). Based on this dew point temperature and allowing for slight warming due to surface contact, a model temperature of 20°C for stormwater discharges during primary conditions seems conservative and reasonable.

2. **Upstream DO.** ADEQ's model uses an upstream DO of 6 mg/L for critical conditions based on 80% saturation at the critical upstream temperature of 30°C. Revising the upstream temperature to 25°C in the critical conditions model results in a DO of 6.6 mg/L at 80% saturation. Similarly, changing the upstream temperature from 22°C to 20°C in the primary conditions model will change the upstream DO from 6.96 mg/L to 7.3 mg/L at 80% saturation.
3. **Reach SOD.** ADEQ's model uses a reach SOD of 2.69 g/m²/day (at 30°C) for critical conditions and 1.69 g/m²/day (at 22°C) based on a 20°C rate of 1.5 g/m²/day. The Memorandum of Agreement specifies acceptable K₂₀ values in the 1.0 to 1.5 g/m²/day range for municipal secondary treatment effluent depending on the nature of the stream bed. Given that the stream and discharge are both dependent on stormwater and have low organic content, a K₂₀ value of 1.0 g/m²/day would be more appropriate. Using the temperature values discussed above, a K₂₀ value of 1.0 g/m²/day results in SOD values of 1.35 g/m²/day for critical conditions (at 25°C) and 1.0 g/m²/day for primary conditions.
4. **Effluent flow.** ADEQ's model uses an effluent flow of 10.3 MGD, representing the highest discharge flow over the previous 2 years. A discharge of this magnitude would only occur as the result of a large storm event resulting in

1.12 @ 22C
1.79 @ 30C

Upstream DO.

significant background flow in the receiving stream. This effluent flow is not representative of 7Q10 conditions as assumed in ADEQ's models.

Using ADEQ's models with the changes discussed above, the resulting permit limits are:

Parameter	Critical Conditions (May – October)	Primary Conditions (November – April)
BOD ₅	60 mg/L 50	43 mg/L 40
DO	3.0 mg/L	6.0 mg/L



A handwritten signature, possibly "D. K. ...", enclosed in a hand-drawn rectangular box. The signature is written in cursive and is somewhat difficult to decipher.

9/3/08

Quick Calculator

Texas fastest 70%-90% values (fastest, shallowest)

Headwater in CFS	0.114282	0.5	0.4352519	0.4	20.10395	0.1
	FPS			Feet		Feet
<input type="text" value="10.3"/> Discharger 1 in MGD	Reach 1 Velocity	<input type="text" value="0.456"/>	Depth	<input type="text" value="1.317"/>	Width	<input type="text" value="26.517"/>
<input type="text" value="0"/> Discharger 2 in MGD	Reach 2 Velocity	<input type="text" value="0.456"/>	Depth	<input type="text" value="1.317"/>	Width	<input type="text" value="26.517"/>
<input type="text" value="0"/> Discharger 3 in MGD	Reach 3 Velocity	<input type="text" value="0.456"/>	Depth	<input type="text" value="1.317"/>	Width	<input type="text" value="26.517"/>
<input type="text" value="0"/> Discharger 4 in MGD	Reach 4 Velocity	<input type="text" value="0.456"/>	Depth	<input type="text" value="1.317"/>	Width	<input type="text" value="26.517"/>
<input type="text" value="0"/> Discharger 5 in MGD	Reach 5 Velocity	<input type="text" value="0.456"/>	Depth	<input type="text" value="1.317"/>	Width	<input type="text" value="26.517"/>
<input type="text" value="0"/> Discharger 6 in MGD	Reach 6 Velocity	<input type="text" value="0.456"/>	Depth	<input type="text" value="1.317"/>	Width	<input type="text" value="26.517"/>
<input type="text" value="0"/> Discharger 7 in MGD	Reach 7 Velocity	<input type="text" value="0.456"/>	Depth	<input type="text" value="1.317"/>	Width	<input type="text" value="26.517"/>
<input type="text" value="0"/> Discharger 8 in MGD	Reach 8 Velocity	<input type="text" value="0.456"/>	Depth	<input type="text" value="1.317"/>	Width	<input type="text" value="26.517"/>
<input type="text" value="0"/> Discharger 9 in MGD	Reach 9 Velocity	<input type="text" value="0.456"/>	Depth	<input type="text" value="1.317"/>	Width	<input type="text" value="26.517"/>
<input type="text" value="0"/> Discharger 10 in MGD	Reach 10 Velocity	<input type="text" value="0.456"/>	Depth	<input type="text" value="1.317"/>	Width	<input type="text" value="26.517"/>

CFS is MGD

MGD is CFS

~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
~~XXXXXXXXXX~~
 BDD Van
 XXXXX
 XXXXX

Dwans-Gibbs EQUATION for Reaeration

$$\frac{21.6 \times V^{0.67}}{D^{1.85}} = 7.67 \text{ day}^{-1}$$

ADEQ 1ST model Run 9/3/2008

BVC

* SIMPLIFIED METHOD PROGRAM *
* COMPLETE INPUT LISTING *

--*-*-*-* 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

9/3/2008

BOD Removal Rate	(1/day)	0.300	
NH3 Decay Rate	(1/day)	0.300	
Sediment Oxygen Demand	(g/m ² /day)	2.690	k20=1.5
Photosynthesis/respiration	(mg/L/day)	-0.000	
Reaeration Coefficient	(1/day)	7.670	Owens-Gibbs

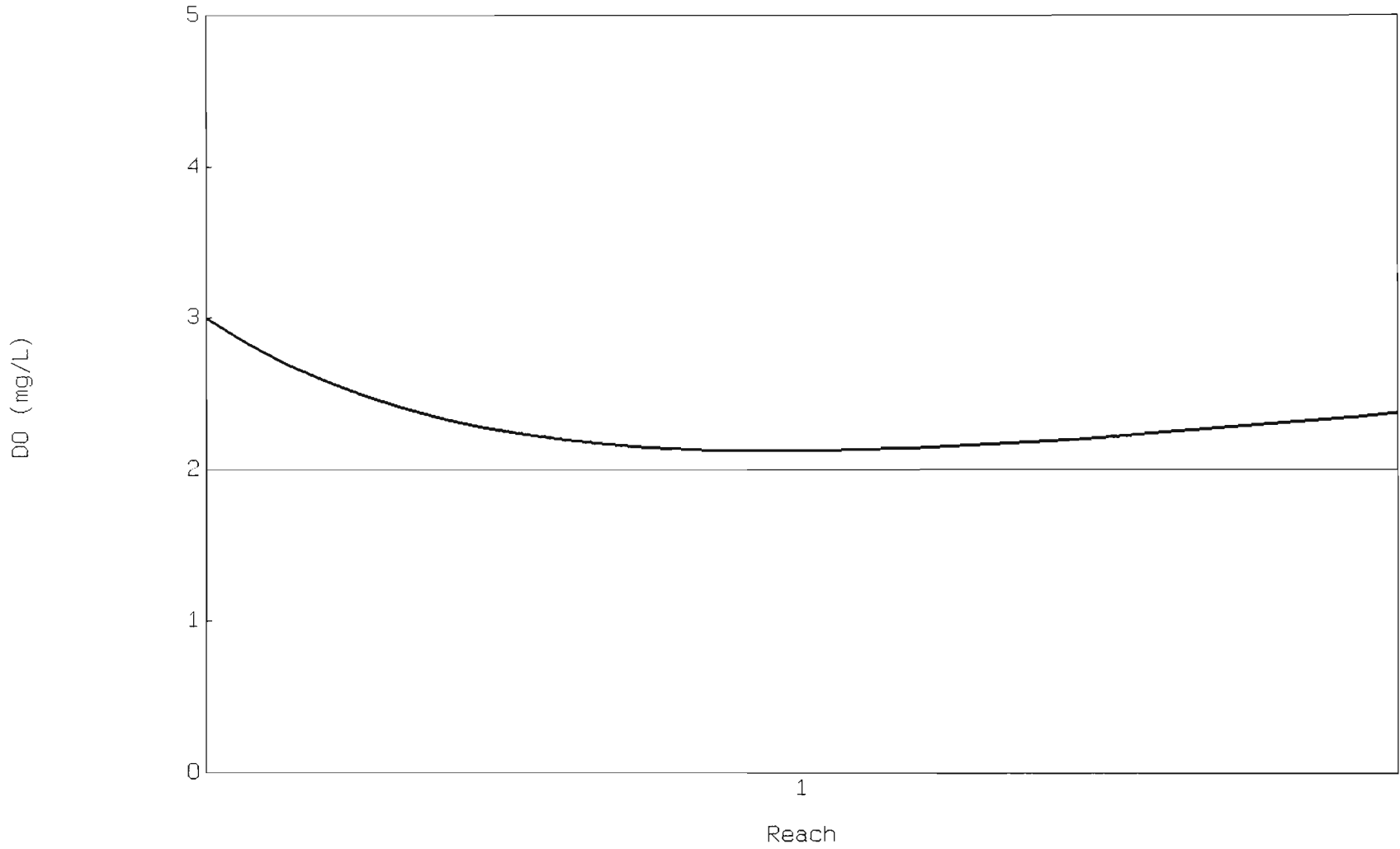
Temperature-corrected BOD removal rate	(1/day)	0.475
Temperature-corrected NH3 decay rate	(1/day)	0.648
Calculated reaeration rate at 20° C	(1/day)	7.670
Temperature-corrected reaeration rate	(1/day)	9.732
Calculated reach-averaged width	(ft)	26.515

--*-*-* Results for unnamed ditch *-*-*-*-*

Discharge is to -- unnamed ditch
Run Title is -- Coopertire_Critical

River Mile	DO Predicted	DO Observed	BOD Predicted	BOD Observed	NH3 Predicted	NH3 Observed
3.000	3.000		103.500		-0.000	
2.900	2.840		102.843		-0.000	
2.800	2.703		102.191		-0.000	
2.700	2.587		101.543		-0.000	
2.600	2.488		100.898		-0.000	
2.500	2.406		100.258		-0.000	
2.400	2.338		99.622		-0.000	
2.300	2.281		98.990		-0.000	
2.200	2.236		98.362		-0.000	
2.100	2.199		97.738		-0.000	
2.000	2.171		97.118		-0.000	
1.900	2.150		96.502		-0.000	
1.800	2.135		95.890		-0.000	
1.700	2.126		95.282		-0.000	
1.600	2.121		94.677		-0.000	
1.500	2.121		94.077		-0.000	
1.400	2.124		93.480		-0.000	
1.300	2.131		92.887		-0.000	
1.200	2.140		92.297		-0.000	
1.100	2.151		91.712		-0.000	
1.000	2.165		91.130		-0.000	
0.900	2.180		90.552		-0.000	
0.800	2.197		89.977		-0.000	
0.700	2.215		89.407		-0.000	
0.600	2.235		88.839		-0.000	
0.500	2.255		88.276		-0.000	
0.400	2.276		87.716		-0.000	
0.300	2.298		87.159		-0.000	
0.200	2.321		86.606		-0.000	
0.100	2.344		86.057		-0.000	
-0.000						
-0.000	2.368		85.511		-0.000	

Dissolved Oxygen Profile
Coopertire_Critical



Max unionized ammonia = 0.0000 mg/L

9/3/2008

BVC

ADEQ 1st Model Run

9/3/2008

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*****
*                               SIMPLIFIED METHOD PROGRAM                               *
*                               COMPLETE INPUT LISTING                               *
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--*-*-* Run Information *-*-*-*-*

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

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--*-*-* 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

9/3/2008

BOD Removal Rate	(1/day)	0.300	
NH3 Decay Rate	(1/day)	0.300	
Sediment Oxygen Demand	(g/m ² /day)	1.690	k20=1.5
Photosynthesis/respiration	(mg/L/day)	-0.000	
Reaeration Coefficient	(1/day)	7.670	Owens-Gibbs

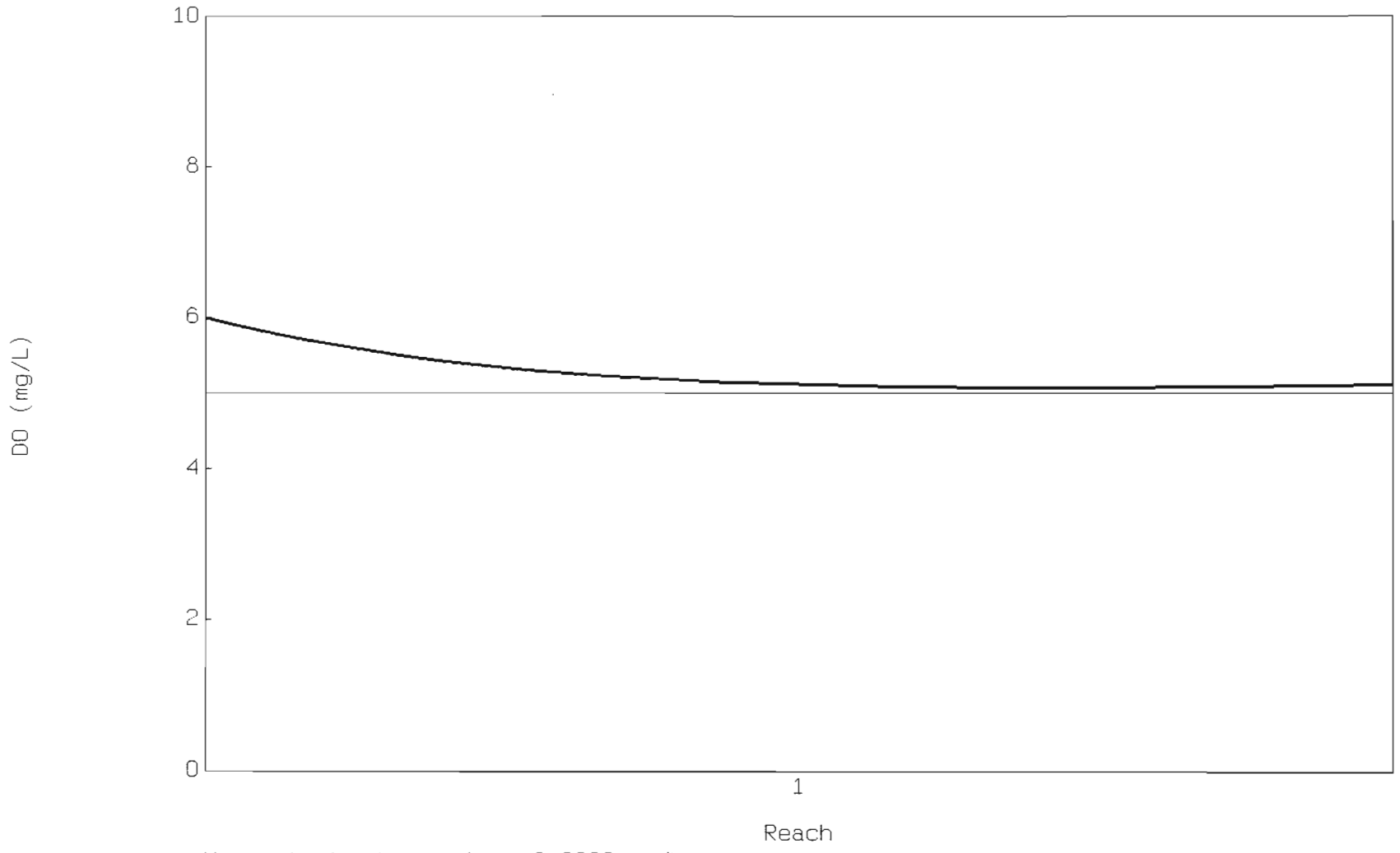
Temperature-corrected BOD removal rate	(1/day)	0.329
Temperature-corrected NH3 decay rate	(1/day)	0.350
Calculated reaeration rate at 20° C	(1/day)	7.670
Temperature-corrected reaeration rate	(1/day)	8.044
Calculated reach-averaged width	(ft)	26.515

--*-*-* Results for unnamed ditch *-*-*-*-*

Discharge is to -- unnamed ditch
Run Title is -- CooperTire_Primary

River Mile	DO Predicted	DO Observed	BOD Predicted	BOD Observed	NH3 Predicted	NH3 Observed
3.000	6.000		80.500		-0.000	
2.900	5.874		80.146		-0.000	
2.800	5.763		79.794		-0.000	
2.700	5.664		79.443		-0.000	
2.600	5.577		79.093		-0.000	
2.500	5.500		78.745		-0.000	
2.400	5.433		78.399		-0.000	
2.300	5.374		78.054		-0.000	
2.200	5.322		77.711		-0.000	
2.100	5.277		77.369		-0.000	
2.000	5.238		77.029		-0.000	
1.900	5.205		76.690		-0.000	
1.800	5.176		76.353		-0.000	
1.700	5.152		76.017		-0.000	
1.600	5.131		75.683		-0.000	
1.500	5.114		75.350		-0.000	
1.400	5.100		75.019		-0.000	
1.300	5.089		74.689		-0.000	
1.200	5.081		74.361		-0.000	
1.100	5.074		74.034		-0.000	
1.000	5.070		73.708		-0.000	
0.900	5.068		73.384		-0.000	
0.800	5.067		73.061		-0.000	
0.700	5.067		72.740		-0.000	
0.600	5.069		72.420		-0.000	
0.500	5.072		72.102		-0.000	
0.400	5.076		71.784		-0.000	
0.300	5.081		71.469		-0.000	
0.200	5.087		71.155		-0.000	
0.100	5.093		70.842		-0.000	
-0.000						
-0.000	5.100		70.530		-0.000	

Dissolved Oxygen Profile
CooperTire_Primary



Max unionized ammonia = 0.0000 mg/L

9/3/2008