

## STATEMENT OF BASIS

### *for the issuance of Final Air Permit # 957-AOP-R5*

**1. PERMITTING AUTHORITY:**

Arkansas Department of Environmental Quality  
8001 National Drive  
Post Office Box 8913  
Little Rock, Arkansas 72219-8913

**2. APPLICANT:**

The Cooper Tire Company, A Division of Cooper Tire & Rubber Company  
3500 East Washington Road  
Texarkana, Arkansas 71854

**3. PERMIT WRITER:**

Amanda Leamons

**4. PROCESS DESCRIPTION AND SIC CODE:**

NAICS Description: Tire Manufacturing  
NAICS Code: 326211

**5. SUBMITTAL:** 12/05/05

**6. REVIEWER'S NOTES:**

Cooper Tire & Rubber Company (Cooper) operates a tire manufacturing plant in Texarkana, Arkansas. This modification allows Cooper to replace 40 old curing presses contained in the Tire Curing Operation, SN-111, with 40 newer presses and to allow the installation of 2 new extruders in the Rubber Extrusion Operations at SN-109. The curing press replacement and the new extruders will not result in an increase in permitted emissions. In addition to the requested modifications, the plantwide emission rates limited through Plantwide 15 were corrected to match the numbers provided in the application for Permit 957-AOP-R4. The HAP emission limits were mistakenly lowered and the emission limits have now been corrected to match the rates which the HAPs were previously permitted at and the rates requested through the R4 application.

**7. COMPLIANCE STATUS:** The following summarizes the current compliance status of the facility including active/pending enforcement actions and recent compliance activities and issues

There is a CAO in routing for Cooper Tire. Based on the November 09, 2005 inspection findings, Cooper exceeded the monthly limit of 7.5 grams/tread/month (NSPS Subpart BBB) by 0.72 grams/tread/month in April of 2005 and by 0.46 grams/tread/month in September of 2005. At this time the CAO has not been signed or issued.

**8. APPLICABLE REGULATIONS:**

**A. Applicability**

Did the facility undergo PSD review in this permit (i.e. BACT, Modeling, etc.)?     N      
 Has this facility undergone PSD review in the past? (Y/N)     N     Permit # :   N/A    
 Is this facility categorized as a major source? (Y/N)     N      
     ≥ 100 tpy and on the list of 28 (100 tpy)? (Y/N)     N      
     ≥ 250 tpy all other (Y/N)     N    

**B. PSD Netting**

Was netting performed to avoid PSD review in this permit? (Y/N)     N/A    

**C. Source and Pollutant Specific Regulatory Applicability**

Source	Pollutant	Regulation
GR-03 & GR-04	All Listed	NSPS Subpart BBB
SN-89	NO <sub>x</sub> , Opacity	NSPS Subpart Db

**9. EMISSION CHANGES:**

The following table summarizes plantwide emission changes associated with this permitting action.

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 957-AOP-R4	Air Permit 957-AOP-R5	Change
PM/PM <sub>10</sub>	92	92	0
SO <sub>2</sub>	128.7	128.7	0

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 957-AOP-R4	Air Permit 957-AOP- R5	Change
VOC	249	249	0
CO	79.9	79.9	0
NO <sub>x</sub>	99.9	99.9	0
Acetophenone*	0.88	0.96	0.08
Acrolein*	0.19	0.2	0.01
Aniline*	2.34	2.49	0.15
Benzyl Chloride*	0	0.02	0.02
1,3 Butadiene*	0.14	0.18	0.04
Carbon Disulfide*	7.74	7.84	0.1
Carbonyl Sulfide *	0.42	0.71	0.29
1,2 Dibromo-2Chloropropane*	0.11	0.11	0
1-Dichloroethene (Vinylidene Chloride)*	0	0.16	0.16
Diethylene Glycol Mono Butyl Ether*	1.5	1.5	0
Ethylbenzene*	0	5.71	5.71
Glycol Ethers*	1.17	1.17	0
Hexane*	0	2.74	2.74
4-Methyl-2-Pentanone (MIK)*	8.05	13.89	5.84
Methylene Chloride	3.47	5.47	2
Phenol*	0.25	0.26	0.01
Styrene*	1.32	2.4	1.08
Toluene*	9.29	9.63	0.34
Xylene*	13.69	17.29	3.6

\* HAP included in VOC totals.

**10. MODELING:**

**A. Criteria Pollutants**

Pollutant	Emission Rate (lb/hr)	NAAQS Standard (µg/m <sup>3</sup> )	Averaging Time	Highest Concentration (µg/m <sup>3</sup> )	% of NAAQS
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Pollutant	Emission Rate (lb/hr)	NAAQS Standard ( $\mu\text{g}/\text{m}^3$ )	Averaging Time	Highest Concentration ( $\mu\text{g}/\text{m}^3$ )	% of NAAQS
PM <sub>10</sub>	21.0	50	Annual	14.28 (38.28)**	29%
		150	24-hour	75.96 (122.96)**	51%
SO <sub>2</sub>	69.4	80	Annual	6.12 (11.12)**	8%
		1,300	3-hour	133.0 (157)**	10%
		365	24-hour	57.2 (88.2)**	16%
NO <sub>x</sub>	99.9	100	Annual	2.89 (27.89)**	3%
VOC	280.7	0.12 ppm	1-hour (ppm)	0.0298 ppm (0.104 ppm)**	25%
CO	*	10,000	8-hour	-	0%
		40,000	1-hour	-	0%

\* Emissions are below 100 tpy and do not warrant modeling at this time.

\*\* Values in parenthesis include 2003 background concentrations.

## B. Non-Criteria Pollutants

### 1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The PAER was deemed by the Department to be the product, in lb/hr, of 0.11 and the Threshold Limit Value ( $\text{mg}/\text{m}^3$ ), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV ( $\text{mg}/\text{m}^3$ )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Acetophenone	49	5.39	0.69	YES
Acrolein	0.23	0.0253	0.05	NO
Aniline	7.6	0.836	0.67	YES
Benzyl Chloride	5.18	0.57	0.01	YES
1,3 Butadiene	4.4	0.484	0.06	YES
Carbon Disulfide	31	3.41	1.81	YES
Carbonyl Sulfide	4.2	0.462	0.17	YES
1,2 Dibromo-2Chloropropane*	0.0097	0.0011	0.03	NO
1-Dichloroethene (Vinylidene Chloride)*	19.83	2.18	0.04	YES
Diethylene Glycol-	17	1.87	0.41	YES

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Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Mono Butyl Ether				
Ethylbenzene	434	47.74	1.34	YES
Glycol Ethers	17	1.87	0.27	YES
Hexane	1762	193.86	0.64	YES
4-Methyl-2Pentanone	417	45.87	3.18	YES
Methylene chloride	174	19.14	1.26	YES
Phenol	19	2.09	0.08	YES
Styrene	213	23.43	0.57	YES
Toluene	188	20.68	2.25	YES
Xylene	434	47.74	3.98	YES

**2nd Tier Screening (PAIL)**

ISCST3 air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary.

The Presumptively Acceptable Impact Level (PAIL) for each compound was deemed by the Department to be one one-hundredth of the Threshold Limit Value, as listed by the ACGIH.

Pollutant	(PAIL, µg/m <sup>3</sup> ) = 1/100 of TLV	Modeled lb/hr	Proposed lb/hr	Modeled Conc.(µg/m <sup>3</sup> )	Pass?
Acrolein	2.3	0.19	0.05	1.58	YES
1,2 Dibromo-2Chloropropane	0.097	0.03	0.0247	0.094	YES

**11. CALCULATIONS:**

SN	Emission Factor Source	Emission Factor and units	Control Equipment Type	Control Equipment Efficiency	Comments
GR-01	RMA	4.00E-04 lb <sub>PM</sub> /lb rubber 3.86E-05 lb <sub>VOC</sub> /lb rubber	Baghouse	95%	RMA is the Rubber Manufacturers Association.
GR-02	RMA	4.00E-04 lb <sub>PM</sub> /lb rubber	Baghouse	95%	
GR-03	MSDS NSPS	PM: 8% solids 10% overspray	None	None	

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SN	Emission Factor Source	Emission Factor and units	Control Equipment Type	Control Equipment Efficiency	Comments
		VOC: 7.5 gr/tread			
GR-04	Stack Test	PM: 0.0015 lb/tire VOC: 2 gr/tire	None	None	
GR-05	RMA	PM: 0.05 lb/tire VOC: 1.59E-2 lb/lb rubber	Baghouse	95.8%	
GR-06	RMA	PM: 0.10 lb/tire VOC: 1.59E-2 lb/lb rubber	Baghouse	99.2%	
GR-08	MSDS	VOC: 6.52 lb/gal ink 9.11 lb/gal thinner	None	None	
SN-07	AP-42 11.24-2	PM: 0.12 lb/ton	Baghouse	95%	
SN-53	AP-42	Standard Natural Gas Standard Fuel Oil	None	None	
SN-55	AP-42	Standard Natural Gas Standard Fuel Oil	None	None	
SN-67	MSDS	VOC: 6.114 lb/gal 6.28 lb/gal (cement)	None	None	
SN-68 SN-106	MSDS	VOC: 6.114 lb/gal 0.5406 lb/gal (paint)	None	None	
SN-89	AP-42	Standard Natural Gas Standard Fuel Oil	None	None	
SN-109	RMA	VOC: 4.2E-5 lb/lb rubber	None	None	
SN-111	RMA	VOC: 3.37E-4 lb/lb rubber	None	None	
SN-121	MSDS	Various	None	None	

**12. TESTING REQUIREMENTS:**

This permit requires no stack testing.

**13. MONITORING OR CEMS:**

The following are parameters that must be monitored with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring (CEM, Pressure Gauge, etc)	Frequency*	Report (Y/N)**
89	NO <sub>x</sub> Opacity	CEM	Continuously	N

\* Indicate frequency of recording required for the parameter (Continuously, hourly, daily, etc.)

\*\* Indicates whether the parameter needs to be included in reports

#### 14. RECORD KEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded, frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

Source	Recorded Item	Limit (as established in permit)	Frequency	Report (Y/N)
GR-03	VOC Emissions per Tread	7.5 grams/tread/month	Monthly	Y
	VOC Content	Listed in Table	Annually	N
GR-04	VOC Emissions of Inside Paint	1.0 grams/tread/month	Monthly	Y
	VOC Emissions of Outside Paint	1.0 grams/tread/month	Monthly	Y
GR-08	Ink/Thinner VOC Content	Listed in Table	Annually	N
SN-53	Sulfur Content	0.30 Weight %	Annually	N
SN-55	Sulfur Content	0.30 Weight %	Annually	N
SN-67	Solvent & Cement VOC Content	Listed in Table	Annually	N
SN-68 SN-106	Solvent & Paint VOC Content	Listed in Table	Annually	N
SN-89	Sulfur Content	0.30 Weight %	Annually	N
Plant	Fuel Oil	5,860,528 Gallons	Annually	Y
Plant	Propane	1,103,760 Gallons	Annually	Y

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Source	Recorded Item	Limit (as established in permit)	Frequency	Report (Y/N)
Plant	All VOC containing material usage All PM containing material usage All HAP containing material usage	249 tpy VOC 92 tpy PM/PM <sub>10</sub> Varies	Monthly	Y
	MSDS	----	As needed	N

**15. OPACITY:**

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism
GR-01 through GR-06	20	Dept Guidance	EPA Method 9
07	20	Dept Guidance	EPA Method 9
53	5	Dept Guidance	EPA Method 9 Burn only Nat. Gas
53	20	Dept Guidance Fuel Oil	EPA Method 9
55	5	Dept Guidance	EPA Method 9 Burn only Nat. Gas
55	20	Dept Guidance Fuel Oil	EPA Method 9
89	5	Dept Guidance	Continuous - CEMS
89	20	Dept Guidance Fuel Oil	Continuous - CEMS

**16. DELETED CONDITIONS:**

The following Specific Conditions were included in the previous permit, but deleted for the current permitting action.

Former S.C.	Justification for Removal
	NONE



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**17. VOIDED, SUPERSEDED OR SUBSUMED PERMITS:**

List all active permits for this facility which are voided/superseded/subsumed by issuance of this permit.

Permit #
957-AOP-R4

**18. CONCURRENCE BY:**

The following supervisor concurs with the permitting decision:

\_\_\_\_\_  
*David Triplett, P.E.*