

## STATEMENT OF BASIS

### *for the issuance of Draft Air Permit # 957-AOP-R3*

**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 Holloway

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

NAICS Description: Tire Manufacturing  
NAICS Code: 326211

**5. SUBMITTALS:** December 9, 2002 and April 14, 2003

**6. REVIEWER'S NOTES:**

Cooper Tire & Rubber Company (Cooper) operates a tire manufacturing plant in Texarkana, Arkansas. This minor modification will increase the permitted emission rates of VOC from SN-109. The increase is attributed to the use of a new rubber compound, known as Compound 6a, which is used in producing silica-based tire tread components. This modification will result in an emissions increase of 7.7 tpy of VOC.

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

This facility is in compliance.

**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)     Y      
     \$ 100 tpy and on the list of 28 (100 tpy)? (Y/N)     N      
     \$ 250 tpy all other (Y/N)     Y    

**B. PSD Netting**

Was netting performed to avoid PSD review in this permit?     N    

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

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD <u>only</u> ]
GR-03	All Listed	40 CFR 60 Subpart BBB- Rubber and Tire Manufacturing Industry
GR-04	All Listed	40 CFR 60 Subpart BBB- Rubber and Tire Manufacturing Industry
SN-89	NOx, Opacity	40 CFR 60 Subpart Db- Industrial-Commercial- Institutional Steam Generating Unit

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**9. EMISSION CHANGES:**

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

<b>Plantwide Permitted Emissions (ton/yr)</b>			
<b>Pollutant</b>	<b>Air Permit 957-AOP-R2</b>	<b>Air Permit 957-AOP-R3</b>	<b>Change</b>
PM/PM <sub>10</sub>	51.3	51.3	0
SO <sub>2</sub>	128.8	128.8	0
VOC	468.3	476.0	7.7
CO	83.9	83.9	0
NO <sub>x</sub>	110.7	110.7	0
Acetophenone	0.91	0.87	-0.04
Acrolein	0.19	0.18	-0.01
Aniline	1.99	1.99	0
1,3 Butadiene	0.18	0.17	-0.01
Carbon Disulfide	7.74	7.74	0
1,2 Dibromo- 2Chloropropane	0.11	0.11	0
Diethylene Glycol Mono Butyl Ether	1.50	1.50	0
Ethyl Benzene	1.20	1.20	0
Formaldehyde	0.46	0.46	0
Glycol Ethers	0.74	0.74	0
Hexane	58.51	58.51	0
Methanol	15.68	15.68	0
MEK	3.66	3.66	0
4-Methyl-2- Pentanone (MIK)	8.05	8.05	0
Methylene Chloride	3.58	3.46	-0.12
Phenol	0.18	0.23	0.05
Styrene	6.7	6.89	0.19
Toluene	40.89	40.80	0.09

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Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 957-AOP-R2	Air Permit 957-AOP-R3	Change
Xylene	18.05	18.05	0

Total VOC Increases from Permit 957-AOP-R0 to 957-AOP-R1				
Source	VOC R0 (TPY)	VOC R1 (TPY)	Change (TPY)	Reason for Change
GR-03 Tread End Cementer	166.0	140.3	25.7	Added new equipment (in a minor mod), changed solvent, changed hours of operation, increased throughput.
GR-04 Green Tire Spray Booth	44.3	13.9	30.4	Changed hours of operation and increased throughput
GR-05 Tire Uniformity Machines	2.0	0.3	1.7	Added new equipment (in a minor mod), changed hours of operation, increased throughput.
GR-06 White Sidewall Buffers	13.6	2.5	11.1	Changed hours of operation, increased throughput.
GR-07 Calender Dip System	38.6	25.5	13.1	Changed hours of operation, increased throughput.
GR-08 Tread Markers	8.6	2.8	5.8	Changed hours of operation, increased throughput.
GR-09 Fuel Oil Tanks	0.4	0.1	0.3	Increased throughput, new TANKS calculations.
67 Tire Building Area	35.0	21.6	13.4	Changed hours of operation, increased throughput, changed solvent
68 Tire Inspection Area	40.9	24.7	16.2	Changed hours of operation, increased throughput, changed solvent

119 Misc VOC Emissions	8.5	0.0	8.5	New accounting for fugitive emissions.
<b>TOTAL</b>	357.9	231.7	126.2	These are the total increases in this modification. There are some minor decreases based on solvent changes that are not included on this table.

**10. MODELING:**

**A. Criteria Pollutants**

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is not warranted at this time.

**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 (mg/m<sup>3</sup>), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Acetophenone	49	5.39	0.21	YES
Acrolein	0.23	0.0253	0.19	NO
Aniline	7.6	0.836	0.46	YES
1,3 Butadiene	4.4	0.484	0.06	YES
Carbon Disulfide	31	3.41	1.77	YES
Carbonyl Sulfide	4.2	0.462	0.10	YES
Diethylene Glycol-Mono	17	1.87	0.41	YES

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Butyl Ether				
Ethylbenzene	434	47.74	0.51	YES
Formaldehyde	1.5	0.165	0.19	NO
Glycol Ethers	17	1.87	0.31	YES
Hexane	176	19.36	24.33	NO
Methanol	262	28.82	6.38	YES
MEK	590	64.9	1.56	YES
4-Methyl-3Pentanone	417	45.87	1.84	YES
Methylene Chloride	174	19.14	0.82	YES
Phenol	19	2.09	0.04	YES
Styrene	213	23.43	2.54	YES
Toluene	188	20.68	15.54	YES
Xylene	434	47.74	18.05	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 Threshold Limit Value	Modeled Concentration (µg/m <sup>3</sup> )	Pass?
Acrolein	2.3	1.58	YES
Formaldehyde	15.0	6.004	YES

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Pollutant	(PAIL, $\mu\text{g}/\text{m}^3$ ) = 1/100 of Threshold Limit Value	Modeled Concentration ( $\mu\text{g}/\text{m}^3$ )	Pass?
Hexane	1,760	768.83	YES

11. CALCULATIONS:

SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
GR-01	RMA	PM 4.00E-04 lb/lb rubber VOC 3.86E-05 lb/lb rubber	Baghouse	95%	RMA is the Rubber Manufacturers Association.
GR-02	RMA	PM 4.00E-04 lb/lb rubber	Baghouse	95%	
GR-03	MSDS NSPS	PM 8% solids 10% overspray VOC 7.5 gr/tread	None	None	
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%	

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SN	Emission Factor Source (AP-42, Testing, etc)	Emission Factor and units (lbs/ton, lbs/hr, etc)	Control Equipment Type (if any)	Control Equipment Efficiency	Comments (Emission factor controlled/uncontrolled, etc)
GR-07	MSDS AP-42	Standard Natural Gas Standard Propane	Baghouse	95%	
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-59	AP-42 11.24-2	PM 0.12 lb/ton	Baghouse	95%	
SN-67	MSDS	VOC 6.25 lb/gal	None	None	
SN-68 SN-106	MSDS	VOC 6.25 lb/gal	None	None	
SN-89	AP-42	Standard Natural Gas Standard Fuel Oil	None	None	
SN-109	RMA	VOC 1.23E-5 lb/lb rubber	None	None	
SN-111	RMA	VOC 3.37E-4 lb/lb rubber	None	None	
SN-119	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 CEM	Continuously 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.

SN	Recorded Item	Limit (as established in permit)	Frequency*	Report (Y/N)**
GR-01	Final Mixed Rubber	262,800 tons	Annually	Y
GR-03	Treads	20,075,005 treads	Annually	Y
GR-03	VOC Emissions per Tread	7.5 grams/tread/month	Monthly	Y
GR-03	VOC Content	Listed in Table	Annually	N
GR-04	VOC Emissions of Inside Paint	1.0 grams/tread/month	Monthly	Y
GR-04	VOC Emissions of Outside Paint	1.0 grams/tread/month	Monthly	Y
GR-06	White Sidewall Tires	17,063,754 Tires	Annually	Y

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SN	Recorded Item	Limit (as established in permit)	Frequency *	Report (Y/N)**
GR-07	Fabric	6,000 Tons	Annually	Y
GR-07	Poly Dip	546,000 Gallons	Annually	Y
GR-07	Poly Dip VOC Content	Listed in Table	Annually	N
GR-08	Ink	1,095 Gallons	Annually	Y
GR-08	Thinner	1,095 Gallons	Annually	Y
GR-08	Ink/Thinner VOC Content	Listed in Table	Annually	N
SN-53	Sulphur Content	0.30 Weight %	Annually	N
SN-55	Sulphur Content	0.30 Weight %	Annually	N
SN-59	Carbon Black	100,000 Tons	Annually	Y
SN-67	Cement	240 Gallons	Annually	Y
SN-67	Solvent	10,950 Gallons	Annually	Y
SN-67	Solvent VOC Content	Listed in Table	Annually	N
SN-68 SN-106	Solvent	1,825 Gallons	Annually	Y
SN-68 SN-106	Paint	10,950 Gallons	Annually	Y
SN-69 SN-106	VOC Content	Listed in Table	Annually	N
SN-72	Solvent	14,667 Gallons	Annually	Y
SN-89	Sulphur Content	0.30 Weight %	Annually	N
SN-109	Final Mixed Rubber	262,800 tons	Annually	Y
SN-119	Solvents	2,760 Gallons	Annually	Y
Plant	Natural Gas	1,996,404 MCF	Annually	Y
Plant	Fuel Oil	5,860,528 Gallons	Annually	Y

SN	Recorded Item	Limit (as established in permit)	Frequency *	Report (Y/N)**
Plant	Propane	1,103,760 Gallons	Annually	Y

**15. OPACITY**

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
GR-01	20	Dept Guidance	Weekly
GR-02	20	Dept Guidance	Weekly
GR-03	20	Dept Guidance	Weekly
GR-04	20	Dept Guidance	Weekly
GR-05	20	Dept Guidance	Weekly
GR-06	20	Dept Guidance	Weekly
GR-07	20	Dept Guidance	Weekly
07	5	Dept Guidance	Daily
07	20	Dept Guidance Fuel Oil	Weekly
53	5	Dept Guidance	Daily
53	20	Dept Guidance Fuel Oil	Weekly
55	5	Dept Guidance	Daily
55	20	Dept Guidance Fuel Oil	Weekly
89	5	Dept Guidance	Continuous
89	20	Dept Guidance Fuel Oil	Continuous

**16. DELETED CONDITIONS:**

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

There were none.

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

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

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**18. CONCURRENCE BY:**

The following supervisor concurs with the permitting decision:

\_\_\_\_\_  
*Lyndon Poole, P.E.*