

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 957-AOP-R7

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: 8/27/07 & 11/06/07

6. REVIEWER'S NOTES:

Cooper Tire & Rubber Company (Cooper) operates a tire manufacturing plant in Texarkana, Arkansas. This modification to Cooper's air permit allows the facility to reduce the heat input rating on Boiler #4 (SN-89) from 108 MMBTU/hr to less than 100 MMBTU/hr when burning natural gas as fuel. Cooper previously de-rated the boiler for low sulfur fuel oil to less than 100 MMbtu/hr. Now that the boiler is rated at a total capacity of less than 100MMbtu/hr for all fuels that Cooper is permitted to burn the boiler will no longer be subject to the standards of 40 CFR Part 60, Subpart Db. Therefore, the facility will no longer be required to operate a CEMS or PEMS to monitor NOx from the boiler and the facility will not be required to perform annual RATA certification.

In addition, Cooper has requested that Rubber Milling (SN-108) and Rubber Calendering (SN-110) now be classified as sources in the permit as opposed to insignificant activities. The sources have been re-classified based on the amount of emissions which could potentially result from these activities.

As a result of the Boiler de-rating modification, the overall annual permitted emissions will decrease 0.3 tons of PM/PM₁₀, 1.7 tons of SO₂, 1.7 tons of CO, and 1.6 of NO_x. As a result of the re-classification of SN-108 and SN-110 as significant sources the overall HAP emissions will increase 5.76 tons per year.

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

Currently there are no active of pending enforcements action against Cooper Tire.

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	Opacity and SO ₂	NSPS Subpart Dc

9. EMISSION CHANGES:

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

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Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 957-AOP-R6	Air Permit 957-AOP-R7	Change
PM/PM ₁₀	54	53.7	-0.3
SO ₂	125.5	125.5	0
VOC	249	249	0
CO	86.3	84.6	-1.7
NO _x	109.8	108.2	-1.6
1,1,2,2- Tetrachloroethane*	0.06	0.06	0
1-Dichloroethene (Vinylidene Chloride)*	0.16	0.16	0
1,2 Dibromo-3 Chloropropane*	0.11	0.11	0
1,3 Butadiene*	0.16	0.16	0
MIBK (4-Methyl-2-Pentanone)*	13.89	16.88	2.99
Acetophenone*	0.94	1	0.06
Acrolein*	0.19	0.2	0.01
Acrylonitrile*	0	0.03	0.03
Aniline*	2.58	2.61	0.03
Arsenic**	0.01	0.01	0
Benzene*	0.24	0.26	0.02
Benzyl Chloride*	0.02	0.02	0
Beryllium**	0.001	0.001	0
bis(2-Ethylhexyl)phthalate*	0.53	0.62	0.09
Cadmium Compounds**	0.01	0.01	0
Carbon Disulfide*	7.83	8.46	0.63
Carbonyl Sulfide *	0.71	0.86	0.15
Ethylbenzene*	5.7	5.74	0.04
Formaldehyde	0.14	0.14	0
Glycol Ethers*	2.67	2.67	0

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Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 957-AOP-R6	Air Permit 957-AOP-R7	Change
Hexachlorobutadiene*	0.108	0.108	0
Hexane*	2.77	2.97	0.2
2,2,4-Trimethyl pentane (Isooctane)*	0.43	0.47	0.04
Lead Compounds*	0.02	0.02	0
Methylene Chloride	6.11	6.35	0.24
Mercury**	0.01	0.01	0
Phenol*	0.24	0.26	0.02
Selenium**	0.01	0.01	0
Styrene*	2.38	2.83	0.45
Tetrachloroethylene (127-18-4)*	1.71	1.73	0.02
Toluene*	10.03	10.5	0.47
Xylene* (m,o, & p isomers)	17.25	17.52	0.27
m-Xylene + p-Xylene* (1330-20-7)	13.95	14.1	0.15
o-Xylene* (95-47-6)	3.3	3.42	0.12
TOTAL HAPs	77.019	82.779	5.76

* HAP included in VOC or PM totals.

10. MODELING:

A. Criteria Pollutants

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 ₁₀	21.0	50	Annual	14.28 (38.28)**	29%
		150	24-hour	75.96 (122.96)**	51%
SO ₂	82	80	Annual	6.58 (11.58)**	8%
		1,300	3-hour	172.3 (203.3)**	13%
		365	24-hour	67.55 (91.55)**	18.5%
NO _x	99.9	100	Annual	2.89 (27.89)**	3%

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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
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 (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
1,1,2,2-Tetrachloroethane	6.87	0.76	0.02	YES
1,1-Dichloroethene (Vinylidene Chloride)*	19.83	2.18	0.04	YES
1,2 Dibromo-3Chloropropane*	0.0097	0.0011	0.025	NO
1,3 Butadiene	4.4	0.484	0.04	YES
MIBK (4-Methyl-2-Pentanone)	417	45.87	3.86	YES
Acetophenone	49	5.39	0.23	YES
Acrolein	0.23	0.0253	0.05	NO
Acrylonitrile	4.34	0.477	0.01	YES
Aniline	7.6	0.836	0.67	YES
Arsenic	0.01	0.0011	0.001	YES
Benzene	1.60	0.176	0.061	YES
Benzyl Chloride	5.18	0.57	0.01	YES
Beryllium	0.002	0.00022	0.001	NO
bis(2-ethylhexyl)phthalate	5	0.55	0.15	YES

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Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
(117-81-7) (DEHP)				
Cadmium Compounds	0.01	0.0011	0.001	YES
Carbon Disulfide	31	3.41	1.94	YES
Carbonyl Sulfide	4.2	0.462	0.20	YES
Ethylbenzene	434	47.74	1.32	YES
Formaldehyde	0.92	0.101	0.064	YES
Glycol Ethers	17	1.87	0.68	YES
Hexachlorobutadiene	0.22	0.0242	0.025	NO
Hexane	1762	193.86	1.06	YES
2,2,4-Trimethyl pentane (Isooctane, 540-84-1)	350	38.5	0.13	Yes
Lead Compounds	0.05	0.0055	0.008	NO
Mercury	0.1	0.011	0.001	YES
Methylene chloride (MeCl)	174	19.14	1.46	YES
Phenol	19	2.09	0.061	YES
Selenium	0.2	0.022	0.01	YES
Styrene	213	23.43	0.65	YES
Tetrachloroethylene (127-18-4) (Perchloroethylene)	169.5	18.65	0.394	YES
Toluene	188	20.68	2.44	YES
Xylene (95-47-6 & 1330-20-7)	434	47.74	4.01	YES

2nd Tier Screening (PAIL)

ISCST3/AERMOD 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 ³) = 1/100 of TLV	Modeled lb/hr	Proposed lb/hr	Modeled Conc.(µg/m ³)	Pass?
Acrolein	2.3	0.19	0.05	1.58	YES

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Pollutant	(PAIL, $\mu\text{g}/\text{m}^3$) = 1/100 of TLV	Modeled lb/hr	Proposed lb/hr	Modeled Conc. ($\mu\text{g}/\text{m}^3$)	Pass?
1,2 Dibromo- 3Chloropropane	0.097	0.03	0.025	0.094	YES
Benzene*	5	0.06	0.06	0.53	YES
Beryllium*	0.02	0.001	0.001	0.001	YES
Hexachlorobutadiene*	2.2	0.025	0.025	0.308	YES
Lead Compounds*	0.50	0.008	0.008	0.141	YES

*The pollutants were screened using AERMOD (April 2007).

11. CALCULATIONS:

SN	Emission Factor Source	Emission Factor and units	Control Equipment Type	Control Equipment Efficiency	Comments
GR-01	RMA	4.00E-04 lb _{PM} /lb rubber 3.86E-05 lb _{VOC} /lb rubber	Baghouse	95%	RMA is the Rubber Manufacturers Association.
GR-02	RMA	4.00E-04 lb _{PM} /lb rubber	Baghouse	95%	
	RMA	4.00E-04 lb _{PM} /lb rubber	Wet Scrubber	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%	
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	

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SN	Emission Factor Source	Emission Factor and units	Control Equipment Type	Control Equipment Efficiency	Comments
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 & Testing	Standard Natural Gas Standard Fuel Oil 99.7 MMBTU/hr 8760 hrs/yr (NG) 6304 hrs/yr (FO) 95.4 MCF/hr (NG) Nat. Gas Factors 10lbpm/MMCF 1.2lbso/MMCF 10lbvoc/MMCF 84lbco/MMCF 73.2lbnox/MMCF Fuel Oil Factors: 6lbpm/kgal 142(.03)lbso/kgal 0.75lbvoc/kgal 25lbco/kgal 22.4lbnox/kgal	None	None	
SN-108	RMA	30 ton/hr thur-put 70% of rubber, milled 50% compd #6a mixed $1.1E-4 \text{ lb}_{\text{compd}\#2}/\text{lb}_{\text{rubber}}$ $0.00371 \text{ lb}_{\text{compd}\#6a}/\text{lb}_{\text{rubber}}$	None	None	
SN-109	RMA	VOC: 4.2E-5 lb/lb rubber	None	None	
SN-110	RMA	30 ton/hr thurput 40% of rubber, calendered $5.59E-5 \text{ lb}_{\text{compd}\#2}/\text{lb}_{\text{rubber}}$	None	None	
SN-111	RMA	VOC: 3.37E-4 lb/lb rubber	None	None	
SN-121	MSDS	Various	None	None	

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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)**
GR-02	Pressure Drop	Pressure gauge & sensors	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-01, SN-109, SN-111	Final Rubber Processed (Mixed & Imported)	220,000 tons/yr	monthly	Y
GR-03, GR-04, GR-05, GR-06	Treads/Tires Processed	17,000,000 treads/yr	monthly	Y
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 Throughput	800 gallons/yr	Monthly	Y
	Solvent Throughput	100 gallons/yr	Monthly	Y

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Source	Recorded Item	Limit (as established in permit)	Frequency	Report (Y/N)
	Ink/Thinner VOC Content	Listed in Table	Annually	N
SN-53	Fuel Oil Throughput	1,388,475 gallons/yr	Monthly, as used	Y
	Sulfur Content	0.3 Weight %	As needed	N
SN-55	Fuel Oil Throughput	2,766,950 gallons/yr	Monthly, as used	Y
	Sulfur Content	0.3 Weight %	As needed	N
SN-59	Carbon Black	80,000 Tons	Monthly	Y
SN-67	Cement	650 Gallons	Monthly	Y
	Solvent	2,000 Gallons	Monthly	Y
	Solvent & Cement VOC Content	Listed in Table	Monthly	N
SN-68, SN-106	Solvent	650 Gallons	Monthly	Y
	Solvent & Paint VOC Content	Listed in Table	Annually	N
SN-89	Fuel Oil Throughput	1,695,103 gallons/yr	Monthly, as used	Y
	Sulfur Content	0.3 Weight %	As Needed	N
SN-121	All HAP containing material usage	1.17 tpy Glycol ethers 0.06 tpy Toluene 0.09 tpy Xylene	Monthly	Y
Plant	All VOC containing material usage	249 tpy VOC	Monthly	Y
	MSDS (VOC & HAP Contents)	----	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

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SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism
GR-02 (SN-61 only)	5	Dept Guidance – Wet Scrubber Control	CPMS
07	20	Dept Guidance	EPA Method 9
53	5	Dept Guidance-NG	EPA Method 9 Burn only Nat. Gas
53	20	Dept Guidance Fuel Oil	E[Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and CFR Part 52, Subpart E]PA Method 9
55	5	Dept Guidance –NG	EPA Method 9 Burn only Nat. Gas
55	20	Dept Guidance Fuel Oil	EPA Method 9
89	5	Dept Guidance - NG	EPA Method 9
89	20	NSPS Dc – 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
75, 79-84	De-rated Boiler #4, no longer subject to NSPS Db when burning natural gas. Now the boiler is subject to NSPS Dc at all times.

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-R6

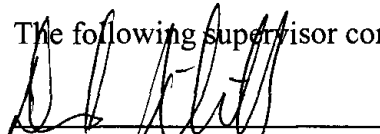
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18. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:



David Triplett, P.E.