

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0957-AOP-R11 AFIN: 46-00005

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Cooper Tire & Rubber Company
3500 East Washington Road
Texarkana, Arkansas 71854

3. PERMIT WRITER:

Charles Hurt, P.E.

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Rubber Product Manufacturing for Mechanical Use
NAICS Code: 326291

5. SUBMITTALS:

6/14/2012

6. REVIEWER'S NOTES:

The Cooper Tire Company (AFIN: 46-00005) operates a tire manufacturing facility located at 3500 East Washington Road, Texarkana, AR 71854. Cooper submitted an application to produce a new sheet rubber product, increase the production capacity of three mixers, add a rubber extrusion line, add ten tire curing presses, and replace the wet scrubber with a fabric filter at one the pellet coolers. Mixer #4 (SN-04), Mixer #7 (SN-51), and Mixer #8 (SN-133) were modified to produce sheet rubber product. The modification involved the replacement of the existing drop mills with rubber sheeters, a combination of rubber calenders and extruders. The mixer bodies of Mixer #2 (SN-02), #4, and #7 were upgraded and resulted in increased rubber production capacity of 2,030 lb/hr, 5,790 lb/hr and 9,450 lb/hr, respectively. Although rubber production capacity increased, permitted rubber throughput and silica usage remain at previously permitted limits. Similarly, the capacity increased at curing press and extrusion line areas but the

rubber throughput remain at previously permitted limits. The only change in permitted emissions was due to the replacement of the scrubber with a fabric filter, and that resulted in a reduction of PM/PM₁₀ by 0.9 tpy.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

The facility was last inspected on February 16, 2012 and determined to be operating in accordance with Permit No. 957-AOP-R10.

8. PSD APPLICABILITY:

a. Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

b. Is the facility categorized as a major source for PSD? N
Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list?

If yes, explain why this permit modification is not PSD?

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
GR-03 & GR-04	All Listed	NSPS Subpart BBB
SN-89	Opacity and SO ₂	NSPS Subpart Dc

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

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. The modeling summary from Permit 957-AOP-R9 has been provided for reference.

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	20.9	150	24-Hour	129.74*	86.5
SO ₂	63.3	80	Annual	10.75	13.5
		1300	3-Hour	191.7	14.8
		365	24-Hour	71.98	19.8
NO _x	31.5	100	Annual	6.58	6.58
Pb	0.00835	0.15	Rolling 3-month Period over 3 years (not to be exceeded in any 3 month period)	0.07752**	51.7

* Includes 2008 Shreveport, LA background concentration.

** Model on a 24-hour basis

Non-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. The modeling summary from Permit 957-AOP-R9 has been provided for reference.

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER 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) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
1,1,2,2-Tetrachloroethane	6.87	0.76	0.02	PASS
1,1-Dichloroethene	19.8	2.18	0.04	PASS
1,2-Dibromo-3-Chloropropane	9.66	1.06	0.03	PASS
1,3-Butadiene	4.42	0.49	0.05	PASS
2,2,4-Trimethyl pentane	1401.5	154.2	0.16	PASS
Acetophenone	49.1	5.41	0.27	PASS
Acrylonitrile	4.34	0.48	0.01	PASS
Aniline	7.54	0.83	0.72	PASS
Benzene	1.60	0.18	0.12	PASS
Benzyl Chloride	5.18	0.57	0.01	PASS
Bis(2-Ethylhexyl)phthalate	5.00	0.55	0.19	PASS
Carbonyl Sulfide	245.7	27.0	0.21	PASS
Ethyl Acrylate	20.5	2.25	0.01	PASS

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Ethyl Benzene	434.2	47.8	1.37	PASS
Glycol Ethers	100.0	11.0	0.68	PASS
Hexane	176.2	19.4	1.09	PASS
Methanol	262.1	28.8	0.01	PASS
Methyl Isobutyl Ketone	81.9	9.01	4.05	PASS
Methylene Chloride	173.7	19.1	1.49	PASS
Phenol	19.2	2.12	0.11	PASS
Selenium	0.200	0.02	0.01	PASS
Styrene	85.2	9.37	0.76	PASS
Tetrachloroethene	169.5	18.6	0.42	PASS
Toluene	75.4	8.29	2.46	PASS
Xylene	434.2	47.8	0.25	PASS
Acrolein	0.229	0.03	0.06	Model
Arsenic	0.010	0.0011	0.01	Model
Beryllium	0.00005	5.50E-06	5.13E-04	Model
Cadmium	0.002	2.20E-04	0.04	Model
Carbon Disulfide	3.11	0.34	1.96	Model
Formaldehyde	0.368	0.04	0.07	Model
Hexachlorobutadiene	0.021	0.0023	0.03	Model
Lead	0.050	0.0055	8.35E-03	Model
Mercury	0.010	0.0011	0.01	Model

2nd Tier Screening (PAIL)

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 has been 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 Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
Acrolein	2.29	0.52	PASS
Arsenic	0.10	0.01	PASS
Beryllium	5.00E-04	4.60E-04	PASS
Cadmium	0.02	2.65E-03	PASS
Carbon Disulfide	31.14	13.98	PASS
Formaldehyde	3.68	0.08	PASS
Hexachlorobutadiene	0.21	0.1996	PASS
Lead	0.50	0.08	PASS
Mercury	0.10	0.01	PASS

Other Modeling:

Odor:

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 for hydrogen sulfide.

12. 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 7.88E-03 lb VOC/ lb silica	Baghouse	95%	RMA is the Rubber Manufacturers Association.
GR-02	RMA	4.00E-04 lb PM /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%	
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: 6.26 lb/gal (solvent) 6.28 lb/gal (cement)	None	None	
SN-68 SN-106	MSDS	VOC: 6.26 lb/gal (solvent) 0.055 lb/gal (paint)	None	None	

SN	Emission Factor Source	Emission Factor and units	Control Equipment Type	Control Equipment Efficiency	Comments
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 10 lb PM/MMCF 1.2 lb SO ₂ /MMCF 10 lb VOC/MMCF 84 lb CO/MMCF 73.2 lb NO _x /MMCF Fuel Oil Factors: 6 lb PM/kgal 142(.03) lb SO ₂ /kgal 0.75 lb VOC/kgal 25 lb CO/kgal 22.4 lb NO _x /kgal	None	None	
SN-108	RMA	30 ton/hr throughput 70% of rubber, milled 50% compd #6a mixed 1.1E-4 lbcompd#2/lbrubber 0.00371 lbcompd#6a/lbrubber	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 lbcompd#2/lbrubber	None	None	
SN-111	RMA	VOC: 3.37E-4 lb/lb rubber	None	None	
SN-121	MSDS	Various	None	None	

13. TESTING REQUIREMENTS:

The permit does not require stack testing.

14. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
GR-02	Pressure Drop	Pressure Gauge and Sensors	continuously	N

15. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

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-01, SN-109, SN-111	Silica Usage	4,000 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
	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

Source	Recorded Item	Limit (as established in permit)	Frequency	Report (Y/N)
Plant	All VOC containing material usage	249 tpy VOC	Monthly	Y
	MSDS (VOC & HAP Contents)	----	As needed	N

16. OPACITY:

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism
GR-01 through GR-06	20	Dept Guidance	EPA Method 9
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

17. DELETED CONDITIONS:

No condition was deleted with this revision.

18. GROUP A INSIGNIFICANT ACTIVITIES

Source Name	Group A Category	Emissions (tpy)			
		VOC	PM ₁₀	HAPs	
				Single	Total
Two (2) 6,000 gallon Naphthenic Petroleum Oil Storage Tanks #1 and #4	A-3	0.074			
1,000 gallon No. 2 Fuel Oil Day Tank	A-3	<0.01			

Source Name	Group A Category	Emissions (tpy)			
		VOC	PM ₁₀	HAPs	
				Single	Total
10,000 gallon Naphthalic Petroleum Oil Storage Tank #6	A-3	0.069			
Three (3) 10,000 gallon Aromatic Petroleum Hydrocarbon Storage Tanks #8, #9, and #10	A-3	<0.01			
10,000 gallon Naphthenic Process Oil Blend Tank #29	A-3	<0.01			
Dust Ring Lube Oil Tank #12	A-3	0.02			
Group A-3 Total		0.173			
Quality Control and Materials testing Lab	A-5	0.02			<0.01
Group A-15 Total		0.02			<0.01
White Side Wall Protective Painters	A-9	0.25	0.27		0.061
Mold and Bladder Lube Application	A-9	<0.01			<0.01
Group A-19 Total		0.26	0.27		<0.01
Two (2) 30,000 gallon Fuel Oil Storage Tanks	A-13	<0.01			
Group A-13 Total		<0.01			

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
0957-AOP-R10

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.

 Phillip Murphy, P.E.
 Engineering Supervisor, Air Division

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION