

STATEMENT OF BASIS

for issuance of Draft Air Permit No. 957-AOP-R0.

1. PERMITTING AUTHORITY:

Arkansas Department of Pollution Control and Ecology
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 Washington
Texarkana, AR 71854.

3. PERMIT WRITER:

Michael H. Watt.

4. PROCESS DESCRIPTION AND SIC CODE:

Rubber Tire Manufacturing.
SIC Code: 3011.

5. REVIEWER'S NOTES:

This is the first Title V for this facility. Cooper has decreased emissions by using the new Rubber Manufacturing Association (RMA) Emission Factors. This has lowered emissions dramatically. This permit also allows for installation of a new tread line to replace an existing tread line to allow for a higher production rate, while lowering VOC emissions.

The VOC emission factors were based on the worst case rubber factors. Therefore, no VOC content limits are required for "rubber" or "tire" limits.

6. EMISSION CHANGES:

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

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 957-AR-9	Air Permit 957-AOP-R0	Change
PM/PM ₁₀	81.6	19.7	-61.9
SO ₂	250.3	125.0	-125.3
VOC	829.0	356.9	-495.5
CO	54.2	52.4	-1.8
NO _x	109.8	106.6	-3.2
Acetonitrile	0.62	*	*
Acetophenone	1.28	0.56	-0.72
Acrolein	0.85	0.06	-0.79
Acrylonitrile	0.55	*	*
Allyl chloride	0.60	*	*
Aniline	4.89	0.90	-3.99
Benzene	0.36	*	*
Benzidine	0.02	*	*
Benzotrichloride	0.01	*	*
DEHP	0.93	*	*
1,3 Butadiene	2.55	1.18	-1.37
Carbon Disulfide	6.43	3.71	-2.72
Carbon Tetrachloride	0.30	*	*
Carbonyl Sulfide	1.06	0.27	-0.79

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Pollutant	Air Permit 957-AR-9	Air Permit 957-AOP-R0	Change
2-Chloroaceto-phenone	0.01	*	*
Chloroform	0.30	*	*
1,2 Dibromo-2Chloropropane	0.51	0.05	-0.46
1,4-Dichlorobenzene	0.24	*	*
3,3'-Dichloro-benzidene	0.03	*	*
Dicholorethyl Ether	0.01	*	*
3,3'-Dimethoxy-benzidine	0.06	*	*
3,3'Dimethyl-benzidine	0.02	*	*
2,4-Dinitrophenol	0.10	*	*
2,4-Dinitrotoluene	0.03	*	*
1,4-Dioxane	0.75	*	*
Epichlorohydrin	0.60	*	*
Ethylbenzene	35.34	0.68	-34.66
Ethylene Dibromide	0.19	*	*
Ethylene Dichloride	0.23	*	*
Ethylidene Dichloride	0.19	*	*
Formaldehyde	0.89	0.21	-0.68

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Pollutant	Air Permit 957-AR-9	Air Permit 957-AOP-R0	Change
Hexachloro-benzene	0.02	*	*
Hexachloro-butadiene	0.45	*	*
Hexane	54.85	33.22	-21.63
Hydroquinone	8.36	*	*
Isophorone	3.85	*	*
Methanol	4.78	6.30	1.52
MEK	5.01	2.25	-2.76
MIK	17.80	*	*
4,4'Methylenebis	0.04	*	*
4-Methyl-3Pentanone	0.00	5.09	5.09
Methylene Chloride	18.13	2.20	-15.93
N-Nitroso-dimethylamine	0.06	*	*
Quitobenzene	0.07	*	*
Phenol	0.51	0.09	-0.42
Propylene Dichloride	0.19	*	*
Propylene Oxide	1.38	*	*
Styrene	3.17	4.33	1.16
1,1,2,2-Tetrachloro-ethane	0.19	*	*

Pollutant	Air Permit 957-AR-9	Air Permit 957-AOP-R0	Change
Tetrachloro-ethylene	1.55	*	*
Toluene	43.95	21.31	-22.64
1,1,2-Trichloroethane	0.18	*	*
Vinyl Acetate	0.90	*	*
Vinyl Chloride	0.30	*	*
Vinylidene Chloride	0.22	*	*
Xylene	2.47	2.54	0.07
m-Xylene and p-Xylene	31.90	6.19	-25.71

* These are chemicals that were determined to be reduced to below de minimis levels by using the new emission factors and therefore not reported.

7. CALCULATIONS:

At source locations for which no comments appear below, the emission calculations received the reviewer’s concurrence as submitted by the facility in the permit application.

KEY: Abbreviations used in the following tables: SN = Source Number, SC = Specific Condition. For all sources deemed insignificant, the permit writer has reviewed submitted calculations, and concurs with the emission estimates.

SN	Basis for emission calculation of final permit limits.		Comment.
	lb/hr	ton/yr	
GR-01	Throughput & Emission Factors	Throughput & Emission Factors	-
GR-02	Throughput & Emission Factors	Throughput & Emission Factors	-

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SN	Basis for emission calculation of final permit limits.		Comment.
	lb/hr	ton/yr	
GR-03	Throughput & Emission Factors	Throughput & Emission Factors	-
GR-04	Throughput & Emission Factors	Throughput & Emission Factors	-
GR-05	Throughput & Emission Factors	Throughput & Emission Factors	-
GR-06	Throughput & Emission Factors	Throughput & Emission Factors	-
GR-07	Throughput & Emission Factors	Throughput & Emission Factors	-
GR-08	Throughput & Emission Factors	Throughput & Emission Factors	-
GR-09	Tanks	Tanks	-
07	Throughput & Emission Factors	Throughput & Emission Factors	-
10	Removed		
11	Removed		
12	Removed		
13	Removed		
33	Insignificant		
34	Insignificant		
35	Insignificant		
36	Insignificant		
37	Removed		
38	Removed		

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SN	Basis for emission calculation of final permit limits.		Comment.
	lb/hr	ton/yr	
39	Removed		
41	Removed		
42	Insignificant		
49	Removed		
50	Removed		
53	Throughput & Emission Factors	Throughput & Emission Factors	-
54	Removed		
55	Throughput & Emission Factors	Throughput & Emission Factors	-
56	Insignificant		
59	Throughput & Emission Factors	Throughput & Emission Factors	-
60	Removed		
67	Throughput & Emission Factors	Throughput & Emission Factors	-
68,106	Throughput & Emission Factors	Throughput & Emission Factors	-
72	Tanks	Tanks	-
73	Insignificant		
74	Insignificant		
75	Insignificant		
76	Insignificant		
81	Removed		

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SN	Basis for emission calculation of final permit limits.		Comment.
	lb/hr	ton/yr	
89	Throughput & Emission Factors	Throughput & Emission Factors	-
90	Insignificant		
91	Insignificant		
92	Insignificant		
93	Insignificant		
94	Insignificant		
95	Insignificant		
107	Emissions Routed Through GR-01		
108	Insignificant		
109	Throughput & Emission Factors	Throughput & Emission Factors	-
110	Insignificant		
111	Throughput & Emission Factors	Throughput & Emission Factors	-
112	Insignificant		
113	Emissions Routed Through SN-109		
114	Emissions Routed Through SN-109		

8. 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	8	50	Annual	4.2	8%
		150	24-hour	47.67	32%
SO ₂	29	80	Annual	15.22	19%
		365	24-hour	172.79	47%
NO _x	38.3	100	Annual	20.1	20%
CO	19.2	10,000	8-hour	224.61	2%
		40,000	1-hour	466.58	1%

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).

SN(s)	Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
109	Acetophenone	49	5.39	0.28	Y
109,111	Acrolein	0.23	0.0253	0.3	N
111	Aniline	7.6	0.836	0.28	Y

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SN(s)	Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
GR-07, 109	1,3 Butadiene	4.4	0.484	0.6	N
GR-01, 111	Carbon Disulfide	31	3.41	1.27	Y
GR-01	Carbonyl Sulfide	4.2	0.462	0.14	Y
GR-03	Ethylbenzene	434	47.74	0.26	Y
GR-07	Formaldehyde	0.37	0.0407	0.11	N
GR-03	Hexane	176	19.36	12.32	Y
GR-07	Methanol	262	28.82	3.04	Y
68, 106	MEK	590	64.9	0.84	Y
GR-01	4-Methyl-3Pentanone	417	45.87	2.54	Y
109	Methylene Chloride	174	19.14	1.1	Y
GR-01, 111	Phenol	19	2.09	0.04	Y
GR-01, GR-07, 67, 68, 106	Styrene	213	23.43	1.46	Y
68, 106, 109, 111	Toluene	188	20.68	8.85	Y
GR-03	Xylene	434	47.74	0.95	Y
111	m-Xylene and p-Xylene	434	47.74	1.91	Y

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.

SN(s)	Pollutant	(PAIL, $\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Pass?
109,111	Acrolien	2.3	0.95	Y
GR-07, 109	1,3 Butadiene	44	1.9	Y
GR-07	Formaldehyde	3.7	3.48	Y

9. TESTING AND OPERATIONAL PARAMETERS:

This permit requires no stack testing.

This permit requires the following operational parameters:

SC	SN(s)	Sampled Material	Parameter	Justification
107	89	NOx and Opacity		40 CFR 60 Subpart Db

10. RECORD KEEPING, REPORTING:

The following specific conditions were included in Air Permit 957-AOP-R0 to require record keeping and reporting of throughput, emissions, or operational parameters:

SC	SN	Recorded Item
4	GR-01	Observations of Opacity.
6	GR-01	Throughput Records
9	GR-02	Observations of Opacity.
11	GR-02	Throughput Records
15	GR-03	Observations of Opacity.
17	GR-03	Throughput Records
19	GR-03	Throughput Records
20	GR-03	Annual NSPS Subpart BBB VOC Test Results
23	GR-04	Observations of Opacity.
27	GR-04	Subpart BBB Throughput Records
29	GR-04	Subpart BBB Throughput Records
30	GR-04	Annual NSPS Subpart BBB VOC Test Results
33	GR-05	Observations of Opacity.
35	GR-05	Throughput Records
38	GR-06	Observations of Opacity.
40	GR-06	Throughput Records
44	GR-07	Observations of Opacity.
46	GR-07	Throughput Records
49	GR-07	Throughput Records
52	GR-08	Throughput Records
55	GR-09	Throughput Records

SC	SN	Recorded Item
58	07	Observations of Opacity.
60	07	Throughput Records
64	53	Observations of Opacity.
66	53	Throughput Records
68	53	Throughput Records
70	53	Fuel Oil Sulfur Content Guarantees
74	55	Observations of Opacity.
76	55	Throughput Records
78	55	Throughput Records
80	55	Fuel Oil Sulfur Content Guarantees
83	59	Observations of Opacity.
85	59	Throughput Records
89	67	Throughput Records
93	68, 106	Throughput Records
95	68, 106	Throughput Records
98	72	Throughput Records
102	89	Observations of Opacity.
104	89	Throughput Records
106	89	Throughput Records
109	89	Fuel Oil Sulfur Content Guarantees
113	109	Throughput Records
117	111	Throughput Records

11. OPACITY:

The following opacity limits are required by this permit.

SC	SN	Opacity	Justification
3	GR-01	5%	18.5
8	GR-02	5%	18.5
14	GR-03	5%	18.5
22	GR-04	20%	18.5
32	GR-05	5%	18.5
37	GR-06	20%	18.5
43	GR-07	5%	18.5
57	07	5%	18.5
62	53	5%	18.5 Natural Gas Burner
63	53	20%	18.5 Fuel Oil Burner
72	55	5%	18.5 Natural Gas Burner
73	55	20%	18.5 Fuel Oil Burner
82	59	5%	18.5
100	89	5%	18.5 Natural Gas Burner
101	89	20%	18.5 Fuel Oil Burner

12. OTHER REQUIREMENTS:

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The following conditions were included in Air Permit 957-AOP-R0 for the purposes described below.

SC	Justification	Citation
1, 7, 12, 21, 31, 36, 41, 50, 53, 56, 61, 71, 81, 86, 90, 96, 99, 110, 114	Sets Criteria Pollutant Emission Limits	19.5 40 CFR 52 E
2, 13, 42, 87, 91, 111, 115	Sets HAP Emission Limits	18.8
5, 10, 16, 24, 34, 39, 45, 47, 51, 54, 59, 65, 67, 75, 77, 84, 88, 92, 94, 97, 103, 105, 112, 116	Sets Throughput Limits	ACA 40 CFR 70.6
48	Sets VOC Content Limits	18.8
69, 79, 108	Sets Fuel Oil Sulfur Content	19.5 and 40 CFR 60.43(h)
18, 26, 28	Sets VOC Limit per Subpart BBB	40 CFR 60 BBB

13. DELETED CONDITIONS:

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

Former SC	Justification for removal.
12	One Time Compliance Test
9	Notification to the Department when using fuel oil.

14. REFERENCES:

- a. Air Permit Application, received January 13, 1997.
- b. Regulation No. 18, as amended July 1, 1997.
- c. Regulation No. 19, as amended July 1, 1997.
- d. Regulation No. 26, as adopted January 27, 1995.
- e. USEPA AP-42 Compilation of Emission Factors, 1/95, Sections 1.4-3 and 1.4-4.
- f. Rubber Manufacturers Association Emission Factors Development Project September, 1996.

15. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Tom Rheume, P.E.