STATEMENT OF BASIS

for the issuance of Draft Air Permit # 378-AOP-R2

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Gates Rubber Company
1801 North Lincoln
Siloam Springs, Arkansas 72761

3. PERMIT WRITER:

Nancy Spencer Rogers

4. PROCESS DESCRIPTION AND SIC CODE:

SIC Description: Rubber Belt Manufacturer
SIC Code: 3052

5. SUBMITTALS: July 25, 2001

6. REVIEWER'S NOTES:

Gates Rubber Company of 1801 North Lincoln Street, Siloam Springs, Benton County, Arkansas manufactures rubber belts. This permit has been modified to add one grinder to SN-13, Bubble Belt Grinders. It is a minor modification to Permit #378-AOP-R1. The total permitted increase in emissions at this facility due to the modification is negligible.

7. COMPLIANCE STATUS:

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

The facility is in compliance at the time of the drafting of this permit.

8. APPLICABLE REGULATIONS:

A. Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, et cetera) (Y/N) N

Has this facility underwent PSD review in the past (Y/N) N Permit # _____
Is this facility categorized as a major source for PSD? (Y/N) N
$ 100 tpy and on the list of 28 (100 tpy)? (Y/N) _____
$ 250 tpy all other (Y/N) _____

B. PSD Netting

Was netting performed to avoid PSD review in this permit? (Y/N) N
If so, indicate increases and decreases used in netting for PSD purposes only.

Not Applicable

C. Source and Pollutant Specific Regulatory Applicability

Not Applicable

9. EMISSION CHANGES:

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

Plantwide Permitted Emissions (ton/yr)			
Pollutant	**Air Permit 378-AOP-R0**	**Air Permit 378-AOP-R1**	**Change**
PM	50.6	50.7	+0.1
PM_{10}	50.6	50.7	+0.1
SO_2	0.3	0.3	---
VOC	226.7	226.8	+0.1
CO	14.4	14.4	---
NO_X	56.4	56.4	---
Toluene	178.63	178.63	---
Carbon Disulfide	8.61	8.61	---
Tetrachloroethene	0.63	0.63	---

Plantwide Permitted Emissions (ton/yr)			
Pollutant	**Air Permit 378-AOP-R0**	**Air Permit 378-AOP-R1**	**Change**
2-Chloro-1,3-Butadiene	0.36	0.36	---
bis(2-Ethylhexyl)phthalate	0.26	0.26	---
Methylene Chloride	7.43	7.43	---
Hexane	11.22	11.22	---
Propylene Oxide	0.14	0.14	---
1,3-Butadiene	0.13	0.13	---
Acetophenone	1.94	1.94	---
Acetaldehyde	0.06	0.06	---
Nickel	0.04	0.04	---
Phenol	0.05	0.05	---
Xylenes	0.25	0.25	---
Carbonyl Sulfide	1.01	1.01	---
Acrolein	0.03	0.03	---
2-Butanone	0.17	0.17	---
Naphthalene	0.05	0.05	---
Di-n-butylphthalate	0.04	0.04	---
Chromium	0.03	0.03	---
Methanol	0.60	0.60	---
MDI	20.62	20.62	---
Formaldehyde	0.60	0.60	---
4-Methyl-2-Pentanone	0.58	0.58	---
Benzene	0.07	0.07	---
Cumene	0.05	0.05	---
Isooctane	0.04	0.04	---
Ethyl Benzene	0.03	0.03	---
Aniline	0.02	0.02	---
1,1,1-Trichloroethane	0.09	0.09	---
o-Toluidine	0.02	0.02	---
Styrene	0.01	0.01	---
Carbon Tetrachloride	0.01	0.01	---

Plantwide Permitted Emissions (ton/yr)			
Pollutant	**Air Permit 378-AOP-R0**	**Air Permit 378-AOP-R1**	**Change**
Chloromethane	0.01	0.01	---
Biphenyl	0.01	0.01	---
Chloroprene	0.20	0.20	---

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.

11. Non-Criteria Pollutants

This permit contains a TLV table for non-criteria pollutants. Modeling was used to determine the permitted emission rates for ranges of non-criteria pollutants (grouped by TLVs) which would pass the *PAER or PAIL*. Therefore, modeling of specific non-criteria pollutants was not performed.

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?**
Toluene	188	20.68	119.02	no
Carbon Disulfide	31	3.41	13.80	no
Tetrachloroethene	170	18.7	1.02	yes
2-Chloro-1,3-Butadiene	36	3.96	0.20	yes
bis(2-Ethylhexyl)phthalate	5*	0.55	0.41	yes
Methylene Chloride	174	19.14	11.91	yes
Hexane	176	19.36	3.03	yes
Propylene Oxide	48	5.28	0.21	yes
1,3-Butadiene	4.4	0.484	0.20	yes

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11*TLV	Proposed lb/hr	Pass?
Acetophenone	49	5.39	3.09	yes
Acetaldehyde	45	4.95	0.12	yes
Nickel	1	0.11	0.01	yes
Phenol	19	2.09	0.09	yes
Xylenes	434	47.74	0.41	yes
Carbonyl Sulfide	14**	1.54	1.59	yes
Acrolein	0.23	0.0253	0.06	no
2-Butanone	590	64.9	0.27	yes
Naphthalene	52	5.72	0.06	yes
Di-n-butylphthalate	5	0.55	0.04	yes
Chromium	0.5	0.055	0.03	yes
Methanol	262	28.82	0.98	yes
MDI	0.01	0.0011	7.47	no
Formaldehyde	15***	1.65	2.30	no
4-Methyl-2-Pentanone	205	22.55	0.93	yes
Benzene	1.6	0.176	0.12	yes
Cumene	246	27.06	0.08	yes
Isooctane	350****	38.5	0.07	yes
Ethyl Benzene	434	47.74	0.05	yes
Aniline	7.6	0.836	0.03	yes
1,1,1-Trichloroethane	1910	210.1	0.16	yes
o-Toluidine	8.8	0.968	0.03	yes
Styrene	85	9.35	0.01	yes
Carbon Tetrachloride	31	3.41	0.01	yes
Chloromethane	103	11.33	0.01	yes
Biphenyl	1.3	0.143	0.01	yes
Chloroprene	36	3.96	0.39	yes

*TLV taken from NTP Chemical Repository (Radian Corporation, August 29, 1991)
**No TLV available. According to the chemical summary for Carbonyl Sulfide prepared by the Office of Pollution and Toxics, USEPA, August 1994, "it is likely that carbonyl sulfide is metabolized to hydrogen sulfide and carbon dioxide." TLV for hydrogen sulfide used.
***Departmentally accepted concentration.
****TLV taken from "Rapid Guide to Hazardous Air Pollutants"

2nd Tier Screening (PAIL)

SCREEN3 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 Threshold Limit Value	Modeled Concentration (µg/m^3)	Pass?
Toluene	1880	—*	no
Carbon Disulfide	310	535	no
Hexane	1760	1262	yes
Acrolein	2.3	0.66	yes
MDI	0.51	13.39	no
Formaldehyde	15	9.59	yes

*This was modeled previously and did pass. It was not remodeled in this form after newer emission factors were found.

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^3) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m^3)	Pass?
Toluene	1880	1788.9	yes
Carbon Disulfide	310	298.5	yes
Hexane	17.6	1262	yes
Acrolein	2.3	0.66	yes
MDI	0.51	---	*yes
Formaldehyde	15	9.59	yes

10. 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)
01	AP-42	Natural Gas ($lb/10^6$ scf) PM/PM_{10}, 13.7 SO_2, 0.6 VOC, 2.8 CO, 35 NO_X, 140 Fuel Oil ($lb/10^6$ scf) PM/PM_{10}, 2.0 SO_2, 71 VOC, 0.2 CO, 5 NO_X, 20	---	---	---
02	AP-42	Same as SN-01	---	---	---
03	Mass Balance		---	---	Assumes 1% loss
04	Mass Balance		---	---	Assumes 1% loss
05	Mass Balance		---	---	Assumes 2% loss
06	AP-42 and Mass Balance	Natural Gas ($lb/10^6$ scf) PM/PM_{10}, 13.7 SO_2, 0.6 VOC, 2.8 CO, 35 NO_X, 140	Catalytic Incinerator/ Pre-Burner Process Blower	81% (90% control) (90% capture)	---
07	Tanks Program		---	---	---
08	Mass Balance		---	---	---
09	Testing and RMA factors*		---	---	---
10	RMA factors*		---	---	---
11	RMA factors*		10 cyclones 10 ESPs	99%	---
12	RMA factors*		8 cyclones 8 ESPs	99%	---
13	RMA factors*		5 cyclones 5 ESPs	99%	---

*RMA factors are attached.

11. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

SN(s)	Pollutant	Test Method	Test Interval	Justification For Test Requirement
06	VOC	25A	every 5 years	Department Guidance

12. 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.

Not Applicable

13. 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)**
01, 02	fuel oil throughput	869,760 gallons per year	monthly	n
03	# of batches	2 batches per day	weekly	n
03-13	VOC emission	Table amount	monthly	n
03-13	HAP Emissions	Table amount	monthly	n
06	VOC emission	Table amount	monthly	n
11-13	rubber throughput	26,290,000 lbs per year	monthly	n

*** Indicate frequency of recording required for the item (Continuously, hourly, daily, etc.)**
**** Indicates whether the item needs to be included in reports**

14. OPACITY

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism (daily observation, weekly, control equipment operation, etc)
01, 02	5% 10%	burning natural gas burning fuel oil	weekly
06	5%	burning natural gas	weekly

15. DELETED CONDITIONS:

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

Former SC	Justification for removal
49, 50	The facility already had other limits which limited this source.

16. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

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

Permit #
378-AOP-R1

17. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

_____

Thomas Rheaume, P.E.