

STATEMENT OF BASIS

for the issuance of Draft Air Permit # 0378-AOP-R4

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

The Gates Corporation
1801 North Lincoln Street
Siloam Springs, Arkansas 72761

3. PERMIT WRITER: Paul Osmon

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Rubber and Plastics Hoses and Belting Manufacturing
NAICS Code: 326220

5. SUBMITTALS: October 8, 2003

6. REVIEWER'S NOTES:

The permittee is installing additional equipment in an existing source. The throughput limits for the sources will not be increased so the tpy limits will not change. There will be very minor increases in the lb/hr limits for the sources.

The permittee has reported that they are be subject to 40 CFR 63, Subpart OOOO – Fabric Printing, Coating and Dyeing - 10 year final MACT standard which has an initial compliance date of May 29, 2006.

7. COMPLIANCE STATUS:

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

There are no known active/pending enforcement actions related to this facility.

8. APPLICABLE REGULATIONS:

PSD Applicability

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

Has this facility undergone PSD review in the past? Y/N Permit# N

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

PSD Netting

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

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation [NSPS, NESHAP (Part 61 & Part 63), or PSD <u>only</u>]
None	NA	

9. EMISSION CHANGES:

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

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit #0378-AOP-R3	Air Permit 0378-AOP-R4	Change
PM/PM ₁₀	50.7	50.7	0
SO ₂	31.1	31.1	0
VOC	227.1	227.1	0
CO	14.4	14.4	0

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit #0378-AOP-R3	Air Permit 0378-AOP-R4	Change
NO _x	56.4	56.4	0
Toluene	178.63	178.63	0
Carbon Disulfide	8.61	8.61	0
Tetrachloroethene	0.63	0.63	0
2-Chloro-1,3-Butadiene	0.36	0.36	0
bis(2-Ethylhexyl)phthalate	0.26	0.26	0
Methylene Chloride	7.43	7.43	0
Hexane	11.21	11.21	0
Propylene Oxide	0.14	0.14	0
1,3-Butadiene	0.13	0.13	0
Acetophenone	1.94	1.94	0
Acetaldehyde	0.06	0.06	0
Nickel	0.04	0.04	0
Phenol	0.05	0.05	0
Xylenes	0.25	0.25	0
Carbonyl Sulfide	1.01	1.01	0
Acrolein	0.03	0.03	0

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit #0378-AOP-R3	Air Permit 0378-AOP-R4	Change
2-Butanone	0.17	0.17	0
Naphthalene	0.05	0.05	0
Di-n-butylphthalate	0.04	0.04	0
Chromium	0.03	0.03	0
Methanol	0.60	0.60	0
MDI	20.62	20.62	0
Formaldehyde	0.60	0.60	0
4-Methyl-2-Pentanone	0.58	0.58	0
Benzene	0.07	0.07	0
Cumene	0.05	0.05	0
Isooctane	0.04	0.04	0
Ethyl Benzene	0.03	0.03	0
Aniline	0.02	0.02	0
1,1,1-Trichloroethane	0.09	0.09	0
o-Toluidine	0.02	0.02	0
Styrene	0.01	0.01	0
Carbon Tetrachloride	0.01	0.01	0

Plant Wide Permitted Emissions (ton/yr)			
Pollutant	Air Permit #0378-AOP-R3	Air Permit 0378-AOP-R4	Change
Chloromethane	0.01	0.01	0
Biphenyl	0.01	0.01	0
Chloroprene	0.20*	0.20	0

* - an error was made in the previous permit; this emission limit not carried in the permit summary.

10. 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.

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 Department deemed PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m³), 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

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11*TL V	Proposed lb/hr	Pass?
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
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

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11*TL V	Proposed lb/hr	Pass?
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, $\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	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

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, $\mu\text{g}/\text{m}^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	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

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)
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	---	---	---

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)
		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	---	---	---	

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)
09	Testin g and RMA factors	---	---	---	
10	RMA factors	---	---	---	
11	RMA factors	11 cyclones 11 ESPs	99%	---	
12	RMA factors	8 cyclones 8 ESPs	99%	---	
13	RMA factors	6 cyclones 6 ESPs	99%	---	

12. TESTING REQUIREMENTS:

This permit requires stack testing of the following sources.

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

13. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and the need for records 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)**
No monitoring or CEMS				

* 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)**
01, 02	Fuel oil throughput	869,760 gallons per year	monthly	Y
03	# of batches	2 batches per day	weekly	Y
03 - 13	VOC emission	Table amount	monthly	Y
03 - 13	HAP Emissions	Table amount	monthly	Y
06	VOC emission	Table amount	monthly	Y
11 - 13	rubber throughput	37,300,000 lbs per year	monthly	Y

* Indicate frequency of recording required for the item (Continuously, hourly, daily, etc.)

** Indicates whether the item needs to be included in reports

15. 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

16. DELETED CONDITIONS:

The previous permit contained the following deleted Specific Conditions.

Former SC	Justification for removal
None	NA

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17. VOIDED, SUPERSEDED OR SUBSUMED PERMITS

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

Permit #
0378-AOP-R3

18. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

Thomas Rheume, P.E.