OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM **June 9, 2003**

TO: Dawson F. Lasseter, Chief Engineer, Permits Section

THROUGH: Eric Milligan, P. E., Engineering Section

THROUGH: Phillip Fielder, P. E., Engineering Section

THROUGH: Peer Review

FROM: David S. Schutz, P.E., New Source Permits Section

SUBJECT: Evaluation of Permit Application **No. 2000-128-C (PSD) (M-1)**
Michelin North America, Inc
Ardmore Rubber Tire Manufacturing
Section 26 – T4S – R1E
Ardmore, Carter County, Oklahoma
Directions: At Northwest Corner from I-35 Exit 32

SECTION I. INTRODUCTION

Michelin North America has applied for a modified construction permit for an expansion to their Ardmore tire plant (SIC Code 3011). The application seeks authorization for added emissions of 134.5 TPY VOC, reducing the emissions associated with previous plans. The proposed project will be a major modification to an existing major source under Prevention of Significant Deterioration (PSD) criteria. The modified permit greatly reduces the amount of new equipment which will be constructed from the magnitude of the project initially authorized.

The project is subject to PSD because the added potential emissions of VOC are greater than the PSD levels of significance for an existing PSD-major source. Full PSD review is required for VOC. Full PSD review of emissions consists of the following: a determination of best available control technology (BACT); an evaluation of existing air quality and determination of monitoring requirements; an evaluation of PSD increment consumption; an analysis of compliance with National Ambient Air Quality Standards (NAAQS); an evaluation of source-related impacts on growth, soils, vegetation, visibility; and a Class I area impact evaluation.

Permit No. 2000-128-C (PSD) was issued for construction of new rubber mixing operations (to accommodate a new tire rubber mix using silica filler), new sidewall extruders, new tire curing presses, replacement green tire sprayers, and new tire uniformity optimizer grinders. Plant capacity was intended to be expanded from 42,250 tires per day to 60,000 tires per day. The plans to increase the capacity of the plant have been abandoned. Only some green tire spray capacity will be replaced, and existing rubber mixing operations will be utilized for the silica rubber.

In a PSD situation, the "net emissions increase" must be quantified. EPA policy is stated in a memorandum from John S. Calcagni (Air Quality Management Division), "Request for Clarification of Policy Regarding the 'Net Emissions Increase'" (September 18, 1989).

> The comparison of prior "actual" to future "potential" emissions is made on a unit-by-unit basis for all emissions units at the source that will be affected by the change. It is done for the emissions unit(s) undergoing the physical change or change in the method of operation and also for any other units at which normal operations could be affected by the change at the source. This, for example, includes a review for possible emissions increase at process-related emission units due to a physical change which removed a bottleneck at only one of the units.

Here, the rubber mixing and compounding operations and tire curing will have an operational change, therefore they are included in the "net emissions increase" calculations. The new green tire sprayers and new silica silos are also included. However, the new rubber mix does not remove a bottleneck, therefore, boiler emissions will not count as "associated emissions increases" since, on a "unit-by-unit" basis, normal operations of the boilers will not be affected. Stringent limits for boilers established under Permit No. 2000-128-C (PSD) will be revised to the limits under Permit No. 96-139-O (M-3); the need for those limitations has been eliminated in the revised project since there will be no increase in tire production.

SECTION II. FACILITY DESCRIPTION

The facility was initially constructed in 1970 and was modified in 1974, 1975, 1976, 1982, 1988, 1991, 1992, 1993, 1996, 1999, and 2001.

Tire making begins with mixing raw materials (natural and synthetic rubbers, carbon black, and accelerators) in a large blender called a Banbury mixer. Mixed rubber of varying compositions are produced in long sheets and stacked on pallets prior to movement to the various rubber-using operations.

The rubber "mixed stock" is used for making tire components in the Stock Preparation Area. Primary components are rubber-coated fabric, rubber-coated wire, and solid rubber profiles for treads, sidewalls, and miscellaneous components. Mixed stock passes through a series of two-roll mills where the rubber stock is blended and warmed by running through the rollers; no external heat is added. The rubber is processed to its final shape by passing through extruders or "calenders," where fabric cord and rubber are pressed flat. Cement is applied to the tread ends to bond the ends together during the tire assembly process.

Tire assembly involves putting together beads, the inner liner, sidewalls, steel belts, and tread. The assembled tire is referred to as a "green tire" or "carcass." Lubricants are applied to the green tire to aid in mold release. The green tires are "cured" with steam heat to fuse the rubber components, imprint the tread pattern, and complete the vulcanizing process. Cured tires proceed to the "TUO" (tire uniformity optimizer) where small amounts of rubber may be ground off the tread and sidewalls.

In addition to the tire manufacturing processes, the plant includes a "bladder" manufacturing unit. "Bladders" are inflatable rubber balloons, which are used during tire curing to press the green tire to its mold from inside the green tire. Bladders are manufactured at the Ardmore plant both for use within the plant and other tire manufacturing locations.

There are three boilers supporting the operations. Two of these predated the first permitting regulation (October 1972), while the third was installed in 1975. Each boiler is rated at 60 MMBTUH and is designed to burn both liquid (either distillate or residual oils) and gas fuels. The facility accepted a limitation in 1996 on fuel sulfur content for all boilers to keep total facility SO_2 emissions below 250 TPY.

Permit No. 96-139-O specified emissions limitations for various operations to ensure that total emissions would be less than 250 TPY of each criteria pollutant. This was in preparation for a modification which added 52 TPY VOC, an emissions level which would be significant for PSD if existing potential emissions were to have exceeded 250 TPY. This permitting action made several “grandfathered” units subject to permitting requirements but did not affect their status with respect to NSPS.

SECTION III. PROJECT DESCRIPTION

The facility is proposing to prepare a new type of rubber, rubber using a silica blend, on existing units at the facility. The tires that contain this silica/elastomer compound have a lower rolling resistance, good grip on cold road surfaces, and better tread wear qualities. This innovation reduces rolling resistance by 20% and results in significant increases in fuel economy. Thus, this new technology results in reduced emissions from fuel-burning in vehicle engines when the vehicles are equipped with tires using the compounding technology.

Although silica offers many advantages, it has a major drawback. It is substantially more expensive than the alternative filler, carbon black. Due to this cost disadvantage, silica can only be used in certain rubber compounds (currently the tread) where the economic results are acceptable. Since only a portion of the tire is tread rubber and only a portion of that tread contains silica, the silica filler is never used at the process’s maximum capacity.

The project will add units which will receive and store silica. Limitations of tire production will remain at the current level of 42,250 tires per day. Mixing of the silica rubber will be conducted in four existing lines (No. 11, 12, 13, and 14).

The requirements of this PSD permit will be incorporated into the Title V operating permit when it is issued.

SECTION IV. EQUIPMENT

A. EXISTING EQUIPMENT

EUG "TBLDG": Tire Building

EU	Point	EU Name	Construction Date
TBLDG-1	PE-216 PE-217	Wire calender	6/72
TBLDG-3	PE-218 PE-219 PE-220 PE-221	Sidewall line mills	10/70
TBLDG-7	PE-223 PE-224 PE-225	Fabric calender	11/70
TBLDG-10	PE-226 PE-227 PE-228	No. 1 Tread Line	10/70
TBLDG-13	PE-229 PE-230 PE-231	No. 2 Tread end line and scrap mill	2/73
TBLDG-16	PE-232 PE-233 PE-234	Inner liner cooling cans	4/94
TBLDG-19	PE-252	Blem repair cyclone	6/72
TBLDG-20	PE-257	WSW inspection and blem repair grinder	4/73
TBLDG-21	PE-280	Apex tuber	1997

EUG "TRED3": Tread Line 3

EU	Point	EU Name	Construction Date
TRED3-1	PE-271 PE-272 PE-274	No. 3 Tread End Line	1/97

EUG "CUR": Tire Curing

EU	Point	EU Name	Construction Date
CUR-1	EF *	Curing presses	1970-1998

* There are 50+ identical exhaust fans serving general building ventilation.

EUG "MEMB": Membrane (Bladder) Manufacturing

EU	Point	EU Name	Construction Date
MEMB-1	PE-253 PE-270 PE-269 EF	Bladder Line	1/73 – 6/92

EUG "PUNCT": Puncture Sealant Mixing & Application ("Royal Seal" Process)

EU	Point	EU Name	Construction Date
PUNCT-1	PE-281	Puncture seal mixer No. 1	1979
PUNCT-2	PE-235	Puncture seal mixer No. 2	1979

EUG "GTS": Green Tire ("Carcass") Spraying

EU	Point	EU Name	Construction Date
GTS-2	PE-247	Green tire sprayer	11/70
GTS-3	PE-248	Green tire sprayer	4/91
GTS-4	PE-249	Green tire sprayer	9/87
GTS-5	PE-275	Green tire sprayer	1998

EUG "TUO": Tire Uniformity Optimization Grinding

EU	Point	EU Name	Construction Date
TUO-1	PE-258	TUO Line Group "E"	6/72
TUO-2	PE-259	TUO Line Group "G"	5/76
TUO-3	PE-260	TUO Line Group "D"	10/71
TUO-4	PE-261	TUO Line Group "H"	10/82
TUO-5	PE-262	TUO Line Group "B"	3/75
TUO-6	PE-263	TUO Line Group "C"	11/77
TUO-7	PE-264	TUO Line Group "Y"	10/89
TUO-8	PE-265	TUO Line Group "X"	9/91

EUG "WSW": White Sidewall Grinding

EU	Point	EU Name	Construction Date
WSW-1	PE-254	WSW Grinder Group "M"	12/75
WSW-2	PE-255	WSW Grinder Group "J"	6/72
WSW-3	PE-256	WSW Grinder Group "F"	4/73

EUG "B1": Boiler No. 1

EU	Point	EU Description	Capacity	Construction Date
B1	PE-245	Keeler Boiler, Model DS10-10	60 MMBTUH	5/72 (installed 1975)

The facility will have an overall limitation for boiler operations. The limitations will include this boiler and the next two.

EUG "B2": Boiler No. 2

EU	Point	EU Description	Capacity	Construction Date
B2	PE-244	Keeler Boiler, Model DS10-10	60 MMBTUH	10/70

EUG "B3": Boiler No. 3

EU	Point	EU Description	Capacity	Construction Date
B3	PE-243	Keeler Boiler, Model DS10-10	60 MMBTUH	10/70

EUG "GEN": Emergency Generator

EU	Point	EU Description	Capacity	Construction Date
GEN-1	GEN-1	Caterpillar D346 (S/N 300PH2014)	350 kW (440 HP)	---

EUG "TANKS": Storage Tanks Not Subject to NSPS

EU	Point	EU Description	Capacity	Construction Date
A	Tank A-1	South solvent tank	8,820 gal.	1991
A	Tank A-2	North solvent tank	8,820 gal.	1991
C	Tank C-1	Vehicle gasoline tank	1,000 gal.	1974
C	Tank C-2	Vehicle diesel tank	1,000 gal.	1974
D	Tank D-1	South pump house diesel tank	350 gal.	1970
D	Tank D-2	North pump house diesel tank	350 gal.	1970
E	Tank E-1	Standby fuel tank	5,754	1991
F	Tank F-1	Emergency fuel storage	420,000 gal.	1973
G	Tank G-1	South pump house diesel tank	350 gal.	1970
G	Tank G-2	North pump house diesel tank	350 gal.	1970
H	Tank H-1	Waste collection tank No. 1	8,820 gal.	1979
H	Tank H-2	Waste collection tank No. 4	8,820 gal.	1982
H	Tank H-3	Waste collection tank No. 3	8,820 gal.	1986
H	Tank H-4	Waste oil skimmer	8,000 gal.	1978
I	Tank I-1	Gear oil bulk storage	8,820 gal.	1981
I	Tank I-2	Hydraulic oil bulk storage	8,820 gal.	1981
J	Tank J-1	Waste pond sludge tank	8,820 gal.	1980
K	Tank K-1	Emergency generator fuel	551 gal.	1970
L	Tank L-1	Membrane shop waste oil	2,220 gal.	1997
M	Tank M-1	Propane	1,000 gal.	1998
M	Tank M-2	Propane	1,000 gal.	1998
M	Tank M-3	Propane	500 gal.	1996
M	Tank M-4	Propane	800 gal.	1996
M	Tank M-5	Propane	1,000 gal.	1996

EUG "EVAP": Evaporative Losses

EU	Point	EU Name	Construction Date
EVAP-1	PE-273	Marking inks	1970-present
EVAP-2	EF	Maintenance parts cleaning	1970-present
EVAP-3	EF	Tire protective coatings	1970-present

EUG "TANKS-1": Storage Tanks Subject to NSPS Subpart Kb

EU	Point	EU Description	Capacity	Construction Date
B	Tank B-1	North process oil tank	30,000 gal.	1992
B	Tank B-2	Middle process oil tank	30,000 gal.	1992
B	Tank B-3	South process oil tank	17,000 gal.	1992

B. PROPOSED NEW AND MODIFIED EQUIPMENT

EUG "MIX-2": Rubber Mixing Operations

EU	Point	EU Name	Construction Date
MIX-1	PE-201	Mix Area Vacuum Cleaner	12-71
MIX-5	PE-209 PE-213 PE-202	Mix Line 11	12-71
MIX2-16	NA*	Mixing Line 13 Silica Silo	12/00
MIX3-2	PE-206 PE-212 PE-203	Mixing Line 12	2/72
MIX3-3	PE-207 PE-208 PE-215 PE-214	Mixing Line 13	11/72
MIX-6	PE-210 PE-211 PE-214 PE-205	Mix Line 14	2-77

* The silica silo operates with a closed system without a discharge point.

EUG "TBLDG-3": No. 4 Sidewall Line

EU	Point	EU Name	Construction Date
TBLDG-23	EF	Sidewall Line No. 4	future

EUG "GTS-2": Green Tire ("Carcass") Spray Operations

EU	Point	EU Name	Construction Date
GTS2-6	PE-246	GTS Sprayer	future
GTS2-7	PE-247	GTS Sprayer	future
GTS2-8	PE-248	GTS Sprayer	future

Stack Parameters

EU	Point	Source	Height (feet)	Diameter (inches)	Flow (acfm)	Temp. (deg F)
MIX-1	PE-201	Mixing area vacuum cleaner	90	6	510	70
MIX3-2	PE-206	Mixing line 12	97	30	4,009	85
MIX3-3	PE-207	Mixing line 13	96	20	18,748	75
MIX3-4	PE-208	Mixing line 13	92	24*36	10,175	84
MIX-5	PE-209	Mixing line 11	91	16*16	19,600	85
MIX-6	PE-210	Mixing line 14	97	30	10,000	85
MIX-7	PE-211	Mixing line 14	92	26*36	23,650	85
MIX3-8	PE-212	Mixing line 12	58	44	17,050	87
MIX-9	PE-213	Mixing line 11	58	44	19,050	76
MIX-10	PE-214	Mixing line 14	90	44	40,000	87
MIX3-11	PE-215	Mixing line 13	90	44	12,940	90
MIX-12	PE-202	L-11 ram exhaust	99	12	2,524*	70
MIX-13	PE-203	L-12 ram exhaust	99	12	2,524*	70
MIX-14	PE-204	L-13 ram exhaust	112	12	4,213 *	70
MIX-15	PE-205	L-14 ram exhaust	99	12	4,213 *	70
MIX2-16	PE-283	Mix Line 13 Silica Silo “A”	91	4	200	70
MIX2-17	PE-284	Mix Line 13 Silica Silo “A”	91	4	200	70
MIX2-18	PE-285	L-15 ram exhaust	99	12	4,213*	70
MIX2-19	PE-288	L-16 ram exhaust	99	12	2,524 *	70
MIX2-20	PE-286	Mix line 15	97	30	10,000	70
MIX2-21	PE-289	Mix line 16	97	30	10,000	70
MIX2-22	PE-290	Mix line 16	92	24 * 36	23,650	100
MIX2-23	PE-287	Mixing line 15	90	44	40,000	120
MIX2-24	PE-291	Mixing line 16	90	44	40,000	120
TBLDG-1	PE-216	Wire calendar	34	36	17,855	85
TBLDG-2	PE-217	Wire calendar mills	34	30	18,400	86
TBLDG-3	PE-218	Sidewall line mills	36	56	20,500	85
TBLDG-4	PE-219	Sidewall calenders & extruders	33	33	8,000	77
TBLDG-5	PE-220	Sidewall calenders	33	26	5,000	77
TBLDG-6	PE-221	Sidewall Apex tuber	32	23	2,800	77
TBLDG-7	PE-223	Fabric calender	34	44	15,000	86
TBLDG-8	PE-224	Fabric calender north	33	30	6,800	81
TBLDG-9	PE-225	Fabric calender south	33	33	11,690	79
TBLDG-10	PE-226	No. 1 tread end cementer	33	30	2,112	61
TBLDG-11	PE-227	No. 1 tread sidewall mill	33	26	6,440	81

* Intermittent flow from these points; flow is for two seconds in approximately 3-minute cycles.

EU	Point	Source	Height (feet)	Diameter (inches)	Flow (acfm)	Temp. (deg F)
TBLDG-12	PE-228	No. 1 tread tuber & ctr mill	35	49	8,600	77
TBLDG-13	PE-229	No. 2 tread end cementer	33	26	7,400	78
TBLDG-14	PE-230	No. 2 Tread feed mill	36	64	10,000	78
TBLDG-15	PE-231	No. 2 tread tuber & scrap mill	33	29	8,600	83
TBLDG-16	PE-232	Inner liner cooling cans	34	40	6,000	80
TBLDG-17	PE-233	Inner liner mills	33	33	10,000	78
TBLDG-18	PE-234	Inner liner calender/extruder	33	33	8,000	78
TBLDG-19	PE-252	Blem repair	31	24*24	8,948	92
TBLDG-20	PE-257	WSW inspection/repair	50	42	16,000	71
TBLDG-21	PE-280	Apex tuber	32	23	16,000	70
TRED3-1	PE-271	No. 3 tread end line	38	13	3,000	70
TRED3-2	PE-272	No. 3 tread end line	38	11	2,120	70
TRED3-3	PE-274	No. 3 tread end line	38	19	3,000	70
MEMB-1	PE-253	Bladder mill and tuber	34	46	20,000	70
MEMB-2	PE-270	Bladder grinding operation	8	35*35	4,000	70
MEMB-3	PE-269	Bladder spraying operation	33	30	4,000	70
PUNCT-1	PE-281	Puncture seal mixer No. 1	33	32	12,000	61
PUNCT-2	PE-235	Puncture seal mixer No. 2	31	26	12,000	75
GTS-1	PE-246	Green Tire Sprayer	31	26	8,000	61
GTS-2	PE-247	Green Tire Sprayer	33	30	8,600	75
GTS-3	PE-248	Green Tire Sprayer	33	34	12,000	76
GTS-4	PE-249	Green Tire Sprayer	29	24	8,375	76
GTS-5	PE-275	Green Tire Sprayer	33	34	12,000	70
GTS2-6	PE-246	Replacement green tire sprayer	31	26	8,000	61
GTS2-7	PE-247	Replacement green tire sprayer	33	30	8,600	75
GTS2-8	PE-275	Replacement green tire sprayer	33	34	12,000	70
TUO-1	PE-258	TUO Group “E”	48	36	4,875	68
TUO-2	PE-259	TUO Group “G”	48	36	4,875	68
TUO-3	PE-260	TUO Group “D”	48	36	4,875	68
TUO-4	PE-261	TUO Group “H”	48	44	7,536	71
TUO-5	PE-262	TUO Group “B”	48	36	4,875	71
TUO-6	PE-263	TUO Group “C”	48	36	4,875	68
TUO-7	PE-264	TUO Group “Y”	44	12	5,600	70
TUO-8	PE-265	TUO Group “X”	44	12	5,600	70
TUO-9	PE-292	New TUO Group	44	12	5,600	70
TUO-10	PE-293	New TUO Group	44	12	5,600	70
WSW-1	PE-254	WSW Group “M”	33	40	16,000	69
WSW-2	PE-255	WSW Group “J”	33	40	16,000	69
WSW-3	PE-256	WSW Group “F”	51	46	26,000	69
B-1	PE-243	Boiler No. 1	41	38	21,772	315
B-2	PE-244	Boiler No. 2	41	38	21,772	315
B-3	PE-245	Boiler No. 3	51	38	21,772	315
EVAP-1	PE-273	Marking ink	35	13	3,000	70

SECTION V. EMISSIONS

Air pollutants will be emitted from gluing/cementing operations, from solid raw materials mixing and handling, from rubber heating/molding operations, from green tire spraying, miscellaneous operations, and the three boilers. Emissions from adhesive usage, green tire spraying, protective coating, and puncture seal ("Royal Seal") are determined on a mass-balance basis. Emissions of powdered solids were determined from stack testing at other facilities. Estimated emissions for the tanks are based on TANKS3.1. Emissions from tire and bladder grinding were estimated from factors supplied by the Rubber Manufacturer's Association (RMA), as were emissions from compounding and extruding conventional tire rubber. Emissions from compounding and extruding silica rubber were based on stack testing by the RMA: compounding operations yield 0.122 pound of ethanol per pound of silane, while curing operations yield 0.049 pounds of ethanol per pound of silane.

Emissions calculations were based on 42,250 tires per day. The sum of emissions shown for individual emissions units will exceed the plantwide total, allowing production to swing between EUGs, but the plantwide "cap" will provide the effective limitation.

Facility boilers may use either natural gas or fuel oil. Hourly emissions shown are for liquid fuels, while annual emissions take into account using both gas and oil fuel. Except for NOx, emissions were calculated using factors for AP-42 (7/98), Section 1.4 for gas fuel, and AP-42 (9/98), Section 1.3 for liquid fuels. NOx emissions are based on the limitations of Subchapter 33 for each fuel. Short-term limits are based on the fuels with worst-case emissions (residual oil for PM and VOC, gas fuel for CO). SO_2 emissions from liquid fuels were based on 0.22% by weight sulfur.

PSD requires "netting", or a determination of the net change in emissions of all projects conducted within a contemporaneous time frame. The application has stated that there were no projects which reduced emissions. All net emissions changes were increases.

The Rubber Manufacturer's Association (RMA) has developed factors for VOC and toxic/HAP emissions from rubber processing; these factors have been proposed, but not yet accepted, for inclusion into AP-42. According to the applicant, whenever a range was specified, the high end of the range was used in calculating VOC emissions.

Post-Project Total Potential Emissions

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG TBLDG	--	--	--	--	--	--	42.1	184.2	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG TRED3	--	--	--	--	--	--	21.1	92.5	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG CUR	--	--	--	--	--	--	23.3	101.9	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG MEMB	0.2	0.7	--	--	--	--	0.4	1.5	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG PUNCT	--	--	--	--	--	--	0.3	1.2	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG GTS	3.8	17.0	--	--	--	--	0.4	2.0	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG TUO	6.0	26.4	--	--	--	--	1.1	5.0	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG WSW	4.9	21.6	--	--	--	--	0.9	4.0	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG B1	4.5	19.6	13.8	48.2	18.0	53.2	0.3	1.3	5.0	17.8

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG B2	4.5	19.6	13.8	48.2	18.0	53.2	0.3	1.3	5.0	17.8

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG B3	4.5	19.6	13.8	48.2	18.0	53.2	0.3	0.9	5.0	17.8

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG GEN	0.2	0.1	0.2	0.1	2.4	0.6	0.2	0.1	0.5	0.1

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG TANKS	--	--	--	--	--	--	0.1	0.2	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG EVAP	--	--	--	--	--	--	5.5	24.3	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG TANKS-1	--	--	--	--	--	--	0.4	1.8	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG MIX-2	2.4	10.4	--	--	--	--	32.9	144.0	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG TBLDG-3	--	--	--	--	--	--	0.5	2.1	--	--

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG GTS-2	3.0	12.6	--	--	--	--	0.4	1.4	--	--

TOTAL EMISSIONS AFTER MODIFICATION

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TBLDG	--	--	--	--	--	--	42.1	184.2	--	--
TRED3	--	--	--	--	--	--	21.1	92.5	--	--
CUR	--	--	--	--	--	--	23.3	101.9	--	--
MEMB	0.2	0.7	--	--	--	--	0.4	1.5	--	--
PUNCT	--	--	--	--	--	--	0.3	1.2	--	--
GTS	3.8	17.0	--	--	--	--	0.4	2.0	--	--
GTS-2	3.0	12.6					0.4	1.4		
TUO	6.0	26.4	--	--	--	--	1.1	5.0	--	--
WSW	4.9	21.6	--	--	--	--	0.9	4.0	--	--
B1	4.5	19.6	13.8	48.2	18.0	53.2	0.3	1.3	5.0	17.8
B2	4.5	19.6	13.8	48.2	18.0	53.2	0.3	1.3	5.0	17.8
B3	4.5	19.6	13.8	48.2	18.0	53.2	0.3	1.3	5.0	17.8
GEN	0.2	0.1	0.2	0.1	2.4	0.6	0.2	0.1	0.5	0.1
TANKS	--	--	--	--	--	--	0.4	1.8	--	--
EVAP	--	--	--	--	--	--	5.5	24.3	--	--
TANKS-1	--	--	--	--	--	--	0.4	1.8	--	--
MIX-2	2.4	10.4	--	--	--	--	32.9	144.0	--	--
TBLDG-3	--	--	--	--	--	--	0.5	2.1	--	--
TOTALS	**34.0**	**147.6**	**41.6**	**144.7**	**56.4**	**160.2**	**130.8**	**571.7**	**15.5**	**53.5**

TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS

Toxic Pollutant	C A S Number	Toxicity Category	De Minimis		Emissions		MAAC
			lb/hr	TPY	lb/hr	TPY	ug/m^3
1,1,1-Trichloroethane *	71556	C	5.60	6.0	0.036	0.16	190961
1,3-Butadiene *	106990	A	0.57	0.6	0.021	0.09	220
2-Chloroacetophenone *	532274	A	0.57	0.6	0.001	0.01	3.2
Acetophenone *	98862	C	5.6	6.0	0.490	2.16	4914
Acrylonitrile *	107131	A	0.57	0.6	0.017	0.07	21
Aniline *	62533	B	1.10	1.2	1.130	4.93	152
Benzene *	71432	A	0.57	0.6	0.020	0.09	32
Biphenyl *	92524	C	5.60	6.0	0.006	0.03	126
bis-(2-Ethylhexyl) phthalate*	117817	A	0.57	0.6	0.112	0.49	50
Cadmium *	7440439	A	0.57	0.6	0.025	0.11	0.5
Carbon black	1333864	A	0.57	0.6	4.930	21.59	35
Carbon disulfide *	75150	B	1.10	1.2	1.790	7.86	62
Carbonyl sulfide *	463581	B	1.10	1.2	0.100	0.44	49
Chromium (trivalent) *	1308389	A	0.57	0.6	0.001	0.01	0.25
Cobalt *	7440484	A	0.57	0.6	0.001	0.01	0.5
Copper	7440508	B	1.10	1.2	0.017	0.07	4
Cumene *	98828	C	5.60	6.0	0.102	0.44	24582
Dibenzofuran *	132649	A	0.57	0.6	0.002	0.01	NE
Ethanol	64175	B	1.10	1.2	30.900	135.10	38000
Heptane	142825	NS	--	--	80.594	353.00	--
Hexachlorobutadiene *	87883	A	0.57	0.6	0.003	0.01	2
Isophorone *	78591	C	5.60	6.0	1.390	6.07	2261
Methylene chloride *	75092	A	0.57	0.6	3.450	15.10	1736
Naphthalene *	91203	B	1.10	1.2	0.081	0.35	1000
n-Hexane *	110543	C	5.60	6.0	1.200	5.04	17628
Nickel *	7440020	A	0.57	0.6	0.014	0.06	0.15
o-Toluidine *	95534	A	0.57	0.6	0.001	0.01	0.09
Phenol *	108952	B	1.10	1.2	0.063	0.28	384
Silica (amorphous fumed)	7631869	A	0.57	0.6	0.260	0.59	0.5
Styrene *	100425	B	1.10	1.2	0.310	1.34	4260
Tetrachlorethylene *	127184	A	0.57	0.6	0.260	1.14	3350
Toluene *	108883	C	5.60	6.0	2.200	9.45	37668
Xylene *	1330207	C	5.60	6.0	1.340	3.39	43427
Zinc	1314132	C	5.60	6.0	0.062	0.269	500

* Hazardous air pollutant (HAP)

Since emissions rates are limited by tire curing rates, total emissions are less than the sum of the individual emission unit group limitations.

NET EMISSIONS CHANGES

A. Emissions Increases

EUG	Description	VOC		PM	
		lb/hr	TPY	lb/hr	TPY
GTS-2	Replacement Green Tire Sprayers	0.4	1.4	3.0	12.6
MIX-2	Silane Rubber Mixing [1]	32.9	144.0	--	--
CUR	Silane Rubber Curing [2]	23.3	101.9	--	--
	TOTALS	56.6	247.3	3.0	12.6

1. based on ethanol emissions of 0.122 lb ethanol per pound silane
2. based on ethanol emissions of 0.049 lb ethanol per pound silane

Since added emissions of PM_{10} are below the PSD level of significance (15 TPY), netting is required only for VOC.

B. Net VOC Emissions Changes – Rubber Curing and Green Tire Sprayers

Pollutant	2001-2002 Actual Emissions, TPY		Post-Project Potential Emissions, TPY	Net Emissions Increases, TPY	PSD Level of Significance, TPY	Subject to PSD Review?
	2001	2002				
VOC	81.3	98.8	247.3	157.2	40	Yes

SECTION VI. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the application are duplicated below. Records are available to confirm the insignificance of the activities. Appropriate recordkeeping of activities indicated below with "*" is specified in the Specific Conditions.

1. Space heaters, boilers, process heaters and emergency flares less than or equal to 5 MMBTU/hr heat input (commercial natural gas). The plant space heaters meet this criterion.

2. Stationary reciprocating engines burning natural, gasoline, aircraft fuels, or diesel fuel which are either used exclusively for emergency power generations or for peaking power service not exceeding 500 hours per year. The emergency generator is in this category.

3. * Emissions from storage tanks constructed with a capacity less than 39,894 gallons which store VOC with a vapor pressure less than 1.5 psia at maximum storage temperature. The diesel fuel and kerosene tanks are in this category.

4. Sanitary sewage collection and treatment facilities other than incinerators and Publicly Owned Treatment Works (POTW). Stacks or vents for sanitary sewer plumbing traps are also included (i.e., lift stations).

5. Hazardous waste and hazardous materials drum staging areas.

6. * Activities that have the potential to emit no more than 5 TPY (actual) of any criteria pollutant. This includes the oil-water separators and propane storage tanks.

The facility will conduct welding and sandblasting during maintenance activities. These are among the “trivial activities” for the facility.

SECTION VII. BEST AVAILABLE CONTROL TECHNOLOGY

BACT was analyzed using the "top-down" approach. In those cases where a control strategy was deemed technologically infeasible or sufficient justification was provided for rejection by energy or environmental impacts, economic costs were not calculated. Control economics were evaluated using equipment lifespan, contingency costs, indirect costs, a discount interest rate, an interest rate on capital, utilities, and labor costs (including benefits, overhead, etc.).

There are three operations subject to BACT for VOC: rubbers mills (mixing the new silica rubber), Sidewall line No. 4, and replacement green tire sprayers.

The majority of added VOC emissions are anticipated from rubber compounding, with sidewall extrusion and green tire spraying less significant. VOC emissions from green tire spraying must meet NSPS, Subpart BBB limitations.

VOC emissions controls fall into two categories: process changes and discharge controls. The former category relies on reducing VOC content in raw materials and the most efficient usage of those raw materials. Outlet VOC control is accomplished by recovery or by combustion. Recovery methods include condensation and adsorption. Combustion may be conducted in a unit designed only to provide combustion (incinerator, etc.), in process equipment (e.g., a boiler), or utilizing microorganisms to achieve the oxidation. Although biofiltration is technically feasible, it is not a proven technology for this type of process.

The application ranked the following emissions control technologies:

- Recuperative thermal oxidizer
- Regenerative thermal oxidizer
- Regenerative catalytic oxidizer
- absorption
- condensation
- raw material changes

The BACT analysis is heavily dependent on predicted stack flows. High ventilation rates are often required by fire prevention codes and/or occupational safety regulations. The size of control equipment and the operating costs of that equipment are proportional to the air flow to be processed. There is also a technological limitation of being able to control a VOC stream to no lower than 20 ppm VOC. (The 20 ppm threshold is incorporated into regulations such as 40 CFR Part 63 Subpart CC for petroleum refineries; since the MACT is theoretically more stringent than BACT, the assertion of a 20 ppm feasibility threshold is acceptable). The higher an air flow is, the more dilute the VOC concentration is, and the more difficult it is to reach 20 ppm. An EPA reference was cited for the BACT analysis, "Survey of Control Technologies for Organic Vapor Gas Streams" (EPA-456, May, 1995).

1. Rubber Mills

The rubber mills processing silica rubber are predicted to have the highest VOC emissions. Based on stack flows as measured by stack testing in the past year and VOC emissions limitations, VOC discharge concentrations are calculated at 24.6 ppm. Flows from Lines 12 and 13 were measured at a total of 126,000 ACFM. Flows from Lines 11 and 14 are expected to be approximately the same for a total air flow of 252,000 ACFM. With a flow of 252,000 ACFM at 70^{o}F, a VOC emission rate of 22.0 lb/hr from the lines blending the silane rubber, and using a molecular weight of 46 (ethanol), the anticipated maximum VOC concentration is 24.6 ppm.

Several of the above control technologies were rejected for technological reasons. Alternative raw materials are not practical. Condensation also is not practical given the high exhaust volume and low temperature needed to achieve any significant reduction. (One potential condensation method would be wet scrubbing; although ethanol is water-soluble, the remaining VOCs emitted have low solubilities in water.) The EPA reference cited states, "Adsorbers generally do not function well with streams below 20 ppm and are not recommended for streams with flow rates greater than 50,000 scfm." The flow here, 252,000 acfm, is well above the recommended threshold. Solid adsorption media are susceptible to plugging by the PM given off by the process.

Of the oxidative controls, regenerative thermal oxidizers (RTOs) provide the most efficient VOC control with the lowest operating costs. The EPA publications, "Control Technologies for Hazardous Air Pollutants" (EPA-625/6-91-014) "Survey of Control Technologies for Low Concentration Organic Vapor Gas Streams" (EPA-456), both recommend RTOs for streams with 50 ppm or more organic vapors. The former publication is geared to MACT determinations which are more stringent than BACT determinations. The latter publication also addresses concentrator-type systems, where VOC is adsorbed from the stream then stripped to a lower-volume stream with higher concentrations prior to destruction. These systems are not recommended for VOC concentrations below 20 ppm and air flows above 50,000 ACFM. The conditions expected for the rubber compounding (24.6 ppm and 252,000 ACFM) are just within the conditions where EPA recommends these air pollution controls based on VOC concentrations, but air flows exceed the recommended maximum.

The application estimated costs of RTOs, the most cost-effective method of VOC control from the modified rubber compounding operations. The cost estimation focused on rubber mixing operations, excluding rubber curing since the VOC concentrations are less than 20 ppm from curing. An initial capital cost of $1,022,672 was provided by a potential vendor for a 27,000 SCFM unit, Durr Environmental. Operating costs and other costs were estimated in accordance with the EPA publication, "OAQPS Cost Control Manual" (5th edition, February 1996, EPA-453/B-96-001). Along with operating costs, total annualized costs were estimated at $360,569. Although mixer VOC emissions are calculated at 144 TPY, a capture efficiency of only 50% is anticipated from the Banbury. A control efficiency of 95% was stated for the added 72 TPY ethanol emissions, or a reduction in VOC of 68.4 TPY. Total annualized control costs were calculated for control of 68.4 TPY of $5,271 per ton. These costs are excessive. Since RTOs are the most cost-effective means of controlling VOC emissions, all other technologies would have higher costs. It is concurred that add-on control costs would be excessive.

BACT for these units is acceptable as no add-on controls. The permit will require stack testing to verify the flow rates upon which the analysis was based, and ambient ozone monitoring will be required to ensure the facility remains an attainment area.

VOC emissions are a function of both rubber processing and silane usage. The permit will limit total silane usage, and rubber usage will be part of a plant-wide limitation.

2. Sidewall Line No. 4

Sidewall Line No. 4 handles conventional rubber mixes. Therefore, VOC emission rates will be well below the preceding mills, and VOC concentrations will be below the 20 ppm threshold at which add-on controls are feasible. There is no feasible raw material substitution.

BACT is acceptable as no add-on controls for this operation. Emissions will be limited by an overall plant-wide limit on rubber processing.

3. Replacement Green Tire Sprayers

This is the only operation for which a raw material substitution is a feasible technology. Add-on controls are not feasible due to low VOC concentrations expected.

A baseline of controls would be represented by the requirements of NSPS, Subpart BBB (40 CFR 60.542(a)(5): 1.2 grams of VOC per tire inside spray and 9.3 grams of VOC per tire outside spray. Subpart BBB also states that performance testing is not required when sprays with lower than 1% VOC are used. The applicant proposes to use green tire spraying compounds with 1% or less VOC. Low-solvent sprays are acceptable as BACT for this operation.

RECENT BACT DETERMINATIONS FOR VOC FROM TIRE MANUFACTURING

Source	Location	Date	Process	BACT
Bridgestone-Firestone	Louisiana	7/20/90	rubber finishing	no add-on controls
Capital Tire	Connecticut	1/10/90	retreading	no add-on controls
Copolymer Rubber & Chemical	Louisiana	10/12/90	rubber finishing	no add-on controls
Cumming-Henderson	California	7/16/96	retreading	no add-on controls
Firestone	North Carolina	7/31/89	undertread cementing	no add-on controls
Firestone	Georgia	11/13/80	tire sealant	no add-on controls
Five Brothers Tire	California	3/5/88	tire buffer	no add-on controls
Five Brothers Tire	California	11/1/89	tire buffer	no add-on controls
Five Brothers Tire	California	3/20/89	tire buffer	no add-on controls
General Tire	Illinois	9/11/89	tread grinding, milling/extruding, assembly, green tire spray	no add-on controls
Goodyear	Virginia	3/18/88	mixer	no add-on controls
Michelin	South Carolina	8/14/96	tire manufacturing	no add-on controls
Michelin	South Carolina	11/16/89	tire manufacturing	no add-on controls
Pirreli-Armstrong	California	9/25/96	steel belt manufacturing	no add-on controls
Uniroyal	Louisiana	12/13/90	rubber production	no add-on controls
Goodyear	Oklahoma	In public review	silica rubber	RTO *

* Use of an RTO at this facility was in partial resolution to an enforcement action.

SECTION VIII. AIR QUALITY IMPACTS

For an area which is affected by emissions from a new major source or modification, an analysis of the existing air quality is required for those pollutants which are emitted in significant quantities. The facility must demonstrate that the project does not cause nor contribute to a violation of the National Ambient Air Quality Standards (NAAQS) nor violate the increments of PSD. In addition, state-only standards affect ambient impacts of toxic air pollutants and sulfur dioxide.

The facility is located in the western part of Ardmore at an elevation of 875 feet above sea level in an area characterized by gently rolling terrain. Some stack heights are less than Good Engineering Practice (GEP) heights, thus building downwash effects will cause ambient impacts to be higher and to occur close to the stacks. Modeling was conducted using the ISCST3 model. Regulatory default options for the model were used in all cases. The techniques used in the air dispersion modeling analysis are consistent with current AQD and U.S. EPA modeling procedures.

A. VOC / Ozone

VOC is not limited directly by NAAQS. Rather, it is regulated as an ozone precursor. EPA developed a method for predicting ozone concentrations based on VOC and NOx concentrations in an area. The ambient impacts analysis utilized these tables from "VOC/NOx Point Source Screening Tables" (Richard Sheffe, OAQPS, September, 1988). The Scheffe tables utilize increases in NOx and VOC emissions to predict increases in ozone concentrations. Total facility post-project emissions were utilized: 160.2 TPY NOx and 571.7 TPY VOC.

The following tables show maximum impacts from the project compared to the ambient levels of significance for ozone. As shown, ambient impacts are below NAAQS; there is no increment standard for ozone. Thus, it has been demonstrated that the plant does not cause nor contribute to an air quality standards violation.

NAAQS COMPLIANCE

Pollutant	Modeled Impacts, ug/m^3	Background Concentration, ug/m^3	Total Impacts, ug/m^3	NAAQS, ug/m^3
Ozone	39	187	226	235

Pre-construction monitoring has already been conducted, showing ozone impacts of 187 ug/m^3 (1-hour average).

COMPARISON OF INCREMENT TO AMBIENT MONITORING LEVELS OF SIGNIFICANCE

Pollutant	Modeled Incremental Impacts, ug/m^3	Monitoring Levels of Significance, ug/m^3	Ambient Monitoring Required?
Ozone (VOC)	133.8 TPY VOC	100 TPY VOC	yes

The applicant has fulfilled all applicable requirements relative to the construction permit application provisions. Pre-construction ambient monitoring of ozone has been conducted in accordance with OAC 252:100-8-35(d).

B. SO_2

Modeling of SO_2 impacts was conducted to show compliance with the ambient impacts limits of OAC 252:100-31.

Receptors were placed from the property boundaries to 10 km distance in all directions with receptor elevations taken from USGS digitized elevation maps. Receptor spacing varied from 100 meters (from the fenceline to 1,000 meters from the fenceline, 500 meter spacing from 1,000 meters to 5,000 meters, and 1,000 meters spacing from 5,000 meters to 10,000 meters.

SO_2 modeling utilized five years (1986-1991 excluding 1990) of preprocessed meteorological data based on surface observations taken from Oklahoma City, Oklahoma, (National Weather Service [NWS] station number 13967) and upper air measurements from Norman, Oklahoma (NWS station number 03946). Since Subchapter 31 requires the addition of an appropriate background level, SO_2 concentrations were taken from the Muskogee air monitoring site.

OAC 252:100-31 AMBIENT IMPACTS COMPLIANCE FOR SO_2

Averaging Time	Standard μg/m^3	Maximum Facility Impacts, μg/m^3
1-hour	1,200	318.3
3-hour	650	242.6
24-hour	130	81.7

C. Toxic Air Pollutants

The potential impacts of emissions of Hazardous and Toxic Air Pollutants were modeled to demonstrate continued compliance with OAC 252:100, Subchapter 41, Control of Emission of Hazardous and Toxic Air Contaminants, at the higher emission rates requested in that application.

Toxic air pollutant modeling utilized a single year (1986) of met data from the same sources. In accordance with SOP No. 9 (Modeling Protocol), a single year of met data is allowed when toxic air pollutant impacts are less than 50% of the MAAC.

The facility-wide annual emission rates of individual hazardous and toxic Air Pollutants were estimated and all but nine of the pollutants were below the de minimis levels in OAC 252:100-41-43. The compounds that were required to be modeled were: aniline, carbon black, carbon disulfide, ethanol, isophorone, methylene chloride, styrene, tetrachloroethylene, and toluene.

Modeling was conducted at initial estimates of emission rates which has been based on 60,000 tires per day (Permit No. 2000-128-C (PSD)). These emission rates have been reduced to levels based on 42,250 tires per day, but stack flows have not been reduced. Therefore, impacts shown will be conservative.

MAAC COMPLIANC FOR COMPOUNDS ABOVE DE MINIMIS LEVELS

Pollutant	**CAS No.**	**Toxic Category**	**Emission Rate**		**Modeled Impact, ug/m^3**	**MAAC, ug/m^3**	**In Compliance?**
			lb/hr	**TPY**			
Aniline	62533	B	1.13	4.93	3.83	152	yes
Carbon Black	1333864	A	4.93	21.59	14.48	35	yes
Carbon Disulfide	75150	B	1.79	7.86	6.01	62	yes
Ethanol	64715	B	30.9	135.10	72.86	38000	yes
Isophorone	78591	C	1.39	6.07	6.80	2261	yes
Methylene Chloride	75092	A	3.45	15.10	9.08	1736	yes
Styrene	100425	C	0.31	1.34	0.98	4260	yes
Tetrachloroethylene	127184	A	0.26	1.14	0.76	3350	yes
Toluene	108883	C	2.20	9.45	6.89	37668	yes

This air dispersion impact analysis demonstrates that air emissions from the site at the production rate of 42,250 tires per day continue to be below the MAAC levels for all pollutants, and therefore in compliance with Subchapter 41.

SECTION IX. OTHER PSD ANALYSES

Growth Impacts

No significant industrial or commercial secondary growth will occur as a result of the project. Only a nominal number of new jobs will be created at the new facility and these will be filled by the local work force in the immediate area. No significant population growth will occur. Only a minimal air quality impact is expected as a result of associated secondary growth.

Soils, Vegetation, and Visibility

There are two portions to a visibility analysis: impacts near the facility and impacts on Class I areas. The applicant has conducted a visibility impact analysis in accordance with guidelines in the Workbook for Estimating Visibility Impairment (EPA-450/ 4-80-031) using EPA's software VISCREEN. A Level 1 screening analysis was performed for the facility's impact on the nearest Class I area, the Wichita Mountains Wildlife Refuge, 130 km (80 miles) away. The analysis used a 160 km visual range as requested by the U.S. Department of the Interior. Since contrast parameters were all computed to be less than the specified level where additional analysis would be required, the Level 1 analysis indicated that it is highly unlikely that the source would cause any adverse visibility impairment in the nearest Class I area. There are no scenic vistas near the vicinity of the project. There will be minimal impairment of visibility resulting from the facility's emissions.

Operation of the facility is not expected to produce any perceptible visibility impacts in the vicinity of the plant. The applicant has attempted to utilize EPA computer software for visibility impacts analyses. The software was intended to predict distant impacts. Attempts to utilize the EPA methods for close-in impacts have resulted in the program prematurely terminating operation. Given the limitation of 20% opacity of discharges, and a reasonable expectation that normal operation will result in 0% opacity, no local visibility impairment is anticipated.

No effect on soils is anticipated from the facility. The application correctly pointed out that the particulate matter is primarily silicon dioxide and inert organic material. These are already among the primary constituents of the local soils.

Impact On Class I Areas

The nearest Class I area is the Wichita Mountains Wildlife Refuge, about 130 km (80 miles) from the facility at nearly a 70^{o} angle to the prevailing winds. The two important tests for impaction on a Class I area are visibility impairment and ambient air quality effect. A visibility analysis in the previous section indicated no impairment of visibility for this area. A significant air quality impact is defined as an ambient concentration increase of 1 ug/m^3, 24 hour average. The radius if impact is 3.2 km from the plant, or 127 km from the Class I area. The extended transport distance to the nearest Class I area precludes any significant air quality impact from the facility.

SECTION X. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Primary Standards are in Appendix E and Secondary Standards are in Appendix F of the Air Pollution Control Rules. At this time, all of Oklahoma is in attainment of these standards. Compliance with these standards is discussed in Section VIII: "Air Quality Impacts".

OAC 252:100-4 (New Source Performance Standards) [Applicable]
Federal regulations in 40 CFR Part 60 are incorporated by reference as they exist on July 1, 2001, except for the following: Subpart A (Sections 60.4, 60.9, 60.10, and 60.16), Subpart B, Subpart C, Subpart Ca, Subpart Cb, Subpart Cc, Subpart Cd, Subpart Ce, Subpart AAA, and Appendix G. Since NSPS, Subparts Kb and BBB are applicable, Subchapter 4 is also. These regulations are addressed in Section XI: "Federal Regulations."

OAC 252:100-5 (Registration, Emissions Inventory, and Annual Fees) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Emission inventories have been submitted and fees paid for the past years.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
Part 5 includes the general administrative requirements for part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the "Insignificant Activities" or "Trivial Activities" thresholds require prior notification to AQD and may require a permit modification. Insignificant activities mean individual emission units that either are on the list in Appendix I (OAC 252:100) or whose actual calendar year emissions do not exceed the following limits:

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for a HAP that the EPA may establish by rule
- 0.6 TPY of any one Category A toxic substance
- 1.2 TPY of any one Category B toxic substance
- 6.0 TPY of any one Category C toxic substance

OAC 252:100-9 (Excess Emission and Malfunction Reporting Requirements) [Applicable]
In the event of any release which results in excess emissions, the owner or operator of such facility shall notify the Air Quality Division as soon as the owner or operator of the facility has knowledge of such emissions, but no later than 4:30 p.m. the next working day. Within ten (10) working days after the immediate notice is given, the owner or operator shall submit a written report describing the extent of the excess emissions and response actions taken by the facility. Part 70/Title V sources must report any exceedance that poses an imminent and substantial danger to public health, safety, or the environment as soon as is practicable. Under no circumstances shall notification be more than 24 hours after the exceedance.

OAC 252:100-13 (Open Burning) [Applicable]
Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter) [Applicable]
This subchapter specifies a particulate matter (PM) emissions limitation of 0.36 lb/MMBTU from fuel-burning equipment with a rated heat input of 60 MMBTU/hr. AP-42 (9/98), Section 1.3 lists the total PM emissions for residual oil fuel as "9.19(S) + 3.22" lb/10^3 gal, where "S" is the sulfur content expressed as a percentage. For 0.3% by weight sulfur and 150,000 BTU/gallon fuel, the worst-case PM emissions are 0.040 lb/MMBTU. This emission rate is in compliance with Subchapter 19.

Subchapter 19 also specifies limitations on PM emissions based on process weight rate. The following table compares emissions limitations with emissions estimates. All points are in compliance with Subchapter 19.

Emission Unit Group	Process Weight Rate, TPH	Subchapter 19 PM Emission Limitation, lb/hr	PM Emissions, lb/hr
EUG MIX	24.3	34.8	4.0
EUG MIX2	23.5	34.0	5.0
EUG MEMB	0.23	1.5	0.2
EUG GTS	31.2	40.3	2.5
EUG TUO	12.5	22.3	6.1
EUG WSW	12.5	22.3	6.1

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]
No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. When burning natural gas there is very little possibility of exceeding these standards. When burning distillate fuel oil, the Title V permit will require daily observation of the stacks and opacity readings to be conducted if visible emissions are detected.

OAC 252:100-29 (Fugitive Dust) [Applicable]
No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. Solids handling operations are conducted in enclosed operations, with most discharges vented to baghouses. Under normal operating conditions, this facility will not cause a problem in this area, therefore it is not necessary to require specific precautions to be taken.

OAC 252:100-31 (Sulfur Compounds) [Applicable]
Fuel-burning equipment at this facility uses commercial natural gas with No. 2 distillate as a back-up fuel. Two of the boilers were installed prior to 1972, the effective date of Subchapter 31, while the third was installed after 1972. Based on the results of air dispersion modeling, the fuel oil sulfur cannot exceed 0.22% by weight sulfur.
Part 2 lists a maximum ambient air concentration limits for existing equipment. Compliance with these standards was demonstrated in the "Ambient Impacts Analyses" section.
Part 5 limits sulfur dioxide emissions from new equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMbtu heat input; for liquid fuels, the limit is 0.8 lb/MMBTU. The gas fuel limit is equivalent to approximately 0.2 weight percent sulfur in the fuel gas which is equivalent to 2,000 ppm sulfur. Thus, a limitation of 4 ppm sulfur in a gas supply will be in compliance. The permit requires the use of commercial-grade natural gas for all fuel-burning equipment other than the boilers to ensure compliance with Subchapter 31. Liquid fuel is limited to 0.22% sulfur, which is equivalent to 0.22 lb/MMBTU and is in compliance with the limitation for liquid fuel of 0.8 lb/MMBTU.

OAC 252:100-33 (Nitrogen Oxides) [Applicable]
This subchapter limits new fuel-burning equipment with rated heat input greater than or equal to 50 MMbtu/hr to emissions of 0.2 lb of NO_x per MMbtu when using gas fuel and 0.3 lb/MMBTU when using liquid fuel. The newest boiler is subject to these limitations. Using AP-42 factors, gas fuel emissions have been estimated at 0.10 lb/MMBTU and fuel oil emissions at 0.15 lb/MMBTU. These emission rates are in compliance with Subchapter 33.

OAC 252:100-35 (Carbon Monoxide) [Not Applicable]
This facility has none of the affected sources: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit.

OAC 252:100-37 (Volatile Organic Compounds) [Applicable]
Part 3 affects new (constructed after December 28, 1974) storage tanks with a capacity between 400 and 40,000 gallons holding an organic liquid with a true vapor pressure greater than 1.5 psia. The rubber solvent and diesel have vapor pressures below the 1.5 psia threshold.
Part 5 limits the VOC content of paints and coatings. Organic materials used as rubber additives are not regulated by Subchapter 37.
Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. The equipment at this location is subject to this requirement.
Part 7 also affects effluent-water separators which receive more than 200 gallons per day of VOC which have a vapor pressure of 1.5 psia or greater. The facility operates effluent water separators for stormwater clean-up and process oil separation. These separators receive less than 200 gallons per day of VOC and the organic materials have vapor pressures below 1.5 psia.

OAC 252:100-41 (Hazardous and Toxic Air Contaminants) [Applicable]
Part 3 addresses hazardous air contaminants. NESHAP, as found in 40 CFR Part 61, are adopted by reference as they exist on July 1, 2001, with the exception of Subparts B, H, I, K, Q, R, T, W and Appendices D and E, all of which address radionuclides. In addition, General Provisions as found in 40 CFR Part 63, Subpart A, and the Maximum Achievable Control Technology (MACT) standards as found in 40 CFR Part 63, Subparts F, G, H, I, L, M, N, O, Q, R, S, T, U, W, X, Y, CC, DD, EE, GG, HH, II, JJ, KK, LL, MM, OO, PP, QQ, RR, SS, TT, UU, VV, WW, YY, CCC, DDD, EEE, GGG, HHH, III, JJJ, LLL, MMM, NNN, OOO, PPP, RRR, TTT, VVV, XXX, CCCC and GGGG are hereby adopted by reference as they exist on July 1, 2001. These standards apply to both existing and new sources of HAPs. NESHAP requirements are addressed in the "Federal Regulations" section.
Part 5 is a state-only requirement governing toxic air contaminants. New sources (constructed after March 9, 1987) emitting any category "A" pollutant which exceeds the de minimis level must perform a BACT analysis. All sources are required to demonstrate that emissions of any toxic air contaminant which exceeds the de minimis level do not cause or contribute to a violation of the MAAC. As shown previously, all emissions which exceed the de minimis levels are within the MAAC standards.

OAC 252:100-43 (Sampling and Testing Methods) [Applicable]
All required testing must be conducted and results calculated by methods approved by the Executive Director under the direction of qualified personnel.

OAC 252:100-45 (Monitoring of Emissions) [Applicable]
Records and reports as Air Quality shall prescribe on air contaminants or fuel shall be recorded, compiled, and submitted as specified in the permit.

The following Oklahoma Air Pollution Control Rules are not applicable to this facility:

OAC 252:100-11	Alternative Emissions Reduction	not requested
OAC 252:100-15	Mobile Sources	not in source category
OAC 252:100-17	Incinerators	not type of emission unit
OAC 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Grain Elevators	not in source category
OAC 252:100-39	Nonattainment Areas	not in area category
OAC 252:100-47	Landfills	not in source category

SECTION XI. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Applicable]

Total added emissions of VOC are greater than the levels of significance. This permit incorporates the requirements of PSD: a BACT analysis, an analysis showing compliance with NAAQS for pollutants with emissions increases above PSD significance levels, an analysis showing compliance with increment consumption (not applicable for VOC/ozone), an analysis of effects on population growth, soils, vegetation, visibility, and Class I area impacts.

NSPS, 40 CFR Part 60 [Subparts Kb and BBB Are Applicable]

Subparts D and Da (Steam Generating Units) affect boilers with rated heat input capacities of 250 MMBTUH or more. Each boiler has a capacity of 60 MMBTUH, which is smaller than the de minimis level for these regulations.

Subpart Db (Steam Generating Units) affects boilers with a rated heat input above 100 MMBTUH. Again, the 60 MMBTUH boilers are smaller than the applicability level.

Subpart Dc (Steam Generating Units) affects boilers with a rated heat input between 10 and 100 MMBTUH with commenced construction, reconstruction, or modification after June 19, 1989. All boilers were constructed prior to this date.

Subpart Kb (VOL Storage Vessels) affects VOL storage vessels with capacities above 10,567 gallons and which were constructed after July 23, 1984. Any vessel with a capacity between 10,567 and 19,813 gallons is subject only to a requirement for keeping records of the dimensions and capacity of the vessel. Tanks which are between 19,813 gallons and 39,857 gallons are but storing an organic liquid with a vapor pressure below 4.0 psia are also required to keep records of the vapor pressures of the materials stored and the period of storage.

Subpart VV (Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry). The equipment is not in a SOCMI plant.

Subpart BBB (Rubber Tire Manufacturing) affects equipment that commence construction, modification, or reconstruction after January 20, 1983: each undertread cementing operation, each sidewall cementing operation, each tread end cementing operation, each bead cementing operation, each green tire spraying operation, and various Michelin-specific operations. Tire curing presses are not an affected operation. The tread end cementing operation permitted under Permit No. 96-139-C is limited to 10 grams per tire of VOC emissions, while the green tire spraying units installed under Permit Nos. 91-035-C and 96-139-C (M-1) are limited to 1.2 grams per tire of VOCs. The Michelin “B” operation will be required either to achieve a 75% control of VOC emissions, or emit no more than 124 lb/day (monthly average).

NESHAP, 40 CFR Part 61 [Not Applicable]
The project involves no emissions of any of the pollutants subject to regulation under 40 CFR 61 except benzene. Subpart J affects process streams with 10% or more by weight benzene; Subpart BB affects transfer and loading of streams with 70% or more by weight benzene; and Subpart FF affects benzene-contaminated waste water handling at petroleum refineries and chemical plants. None of these subparts affects benzene emitted from rubber decomposition during heating.

NESHAP, 40 CFR Part 63 [Not Applicable at this time]
Subpart XXXX for "Tire Production" was promulgated on July 9, 2002. The facility, as an existing source, will have three years to achieve compliance with the standards.
In addition, Subpart DDDDD for "Industrial, Commercial, and Institutional Boilers and Process Heaters" was scheduled to be promulgated by May 2002. Air Quality reserves the right to re-open this permit if any new standards become applicable.

CAM, 40 CFR Part 64 [Not Applicable at this Time]
Compliance Assurance Monitoring (CAM), as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source, that is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant
- It uses a control device to achieve compliance with the applicable emission limit or standard
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY

CAM plans are required as part of the renewal of the facility's Title V operating permit.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]
Toxic and flammable substances subject to this regulation not stored on-site in quantities greater than the threshold quantities. More information on this federal program is available on the web page: *www.epa.gov/ceppo*.

Stratospheric Ozone Protection, 40 CFR Part 82 [Applicable]
This facility does not produce, consume, recycle, import, or export any controlled substances or controlled products as defined in this part, nor does this facility perform service on motor (fleet) vehicles which involves ozone-depleting substances. Therefore, as currently operated, this facility is not subject to these requirements. To the extent that the facility has air-conditioning units that apply, the permit requires compliance with Part 82.

SECTION XII. COMPLIANCE

Tier Classification and Public Review

This application has been determined to be a Tier II based on the request for a PSD construction permit for a modification to an existing facility. The permittee has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant owns the land.

The applicant published the "Notice of Filing a Tier II Application" in *The Daily Ardmorite*, a daily newspaper in Carter County, on December 6, 2002. The notice stated that the application was available for public review in the DEQ Carter County office or the DEQ office in Oklahoma City. The applicant also published a "Notice of Draft Tier II Permit" in *The Daily Ardmorite* on March 20,2003. That notice stated that the draft permit was available for review at the Carter County DEQ office and available on the Air Quality section of the DEQ web page at *www.deq.state.ok.us*. This facility is located within 50 miles of the Oklahoma-Texas border; the state of Texas was notified of the draft permit. No comments were received from the public or the state of Texas. Subsequent to public review, the proposed permit was submitted to EPA Region VI. No comments were received from EPA.

Fees Paid

Modified Part 70 source construction permit fee of $1,500.

SECTION XIII. SUMMARY

The applicant has demonstrated the ability to achieve compliance with all applicable Air Quality rules and regulations. Ambient air quality standards are not threatened at this site. There are no active Air Quality compliance or enforcement issues concerning this facility. Issuance of the permit is recommended.

PERMIT TO CONSTRUCT
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS

Michelin North America, Inc **Permit Number 2000-128-C (PSD) (M-1)**
Ardmore Rubber Tire Manufacturing Plant

The permittee is authorized to construct in conformity with the specifications submitted to Air Quality on June 1, 2000, with supplemental information received August 16, September 18, September 21, and October 12, 2000; and September 16, November 14, and December 20, 2002. The Evaluation Memorandum, dated June 9, 2003, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Commencing construction or operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. Points of emissions and emissions limitations for each point: [OAC 252:100-8-6(a)]

A. EUG "TBLDG": Existing Tire Building Operations

EU ID#	Point ID#	EU Name	PM_{10}		VOC	
			lb/hr	TPY	lb/hr	TPY
TBLDG-1	PE-216 PE-217	Wire calender	0.01	0.01	42.1	184.2
TBLDG-3	PE-218 PE-219 PE-220 PE-221	Sidewall line mills				
TBLDG-7	PE-223 PE-224 PE-225	Fabric calender				
TBLDG-10	PE-226 PE-227 PE-228	No. 1 tread end				
TBLDG-13	PE-229 PE-230 PE-231	No. 2 tread end line and scrap mill				
TBLDG-16	PE-232 PE-233 PE-234	Inner liner cooling cans				
TBLDG-19	PE-252	Blem repair cyclone				
TBLDG-20	PE-257	WSW inspection and blem repair				
TBLDG-21	PE-280	Apex tuber				

B. EUG "TRED3": Existing Tread Making Operations

EU ID#	Point ID#	EU Name	VOC	
			lb/hr	TPY
TRED3-1	PE-271 PE-272 PE-274	No. 3 Tread end line	21.1	92.5

i. The No. 3 Tread End Cementing operation (Krupp-Treadline #3) is subject to 40 CFR Part 60, Subpart BBB and shall comply with all applicable requirements. In accordance with NSPS Subpart BBB, VOC emissions from the tread end cementing unit shall not exceed 10 grams per tire. [40 CFR 60.542(a)(3)]

C. EUG "CUR": Tire Curing Operations

EU ID#	Point ID#	EU Name	VOC	
			lb/hr	TPY
CUR-1	EF *	Curing presses	23.3	101.9

D. EUG "MEMB": Existing Membrane Production Operations

EU ID#	Point ID#	EU Name	PM_{10}		VOC	
			lb/hr	TPY	lb/hr	TPY
MEMB-1	PE-253 PE-270 PE-269	Bladder line	0.2	0.7	0.4	1.5

i. All grinding shall be vented to cyclones or equivalent devices with PM control efficiencies of at least 90%.

E. EUG "PUNCT": Puncture Sealant Mixing & Application

EU ID#	Point ID#	EU Name	VOC	
			lb/hr	TPY
PUNCT-1	PE-235	Puncture seal mixer No. 1	0.3	1.2
PUNCT-2		Puncture seal mixer No. 2		

F. EUG "GTS": Existing Green Tire Spraying Operations

EU ID#	Point ID#	EU Name	PM_{10}		VOC	
			lb/hr	TPY	lb/hr	TPY
GTS-2	PE-247	Green tire sprayer	3.8	17.0	0.4	2.0
GTS-3	PE-248	Green tire sprayer				
GTS-4	PE-249	Green tire sprayer				
GTS-5	PE-275	Green tire sprayer				

i. The Green Tire Spraying operation is subject to 40 CFR Part 60, Subpart BBB and shall comply with all applicable requirements.

ii. All spraying shall be vented to baffle chambers or equivalent devices with PM control efficiencies of at least 50%.

iii. VOC emissions from the green tire spraying units shall not exceed 1.2 grams per tire for inside carcass sprays. [40 CFR 60.542(a)(5)(i)]

iv. VOC emissions from the green tire spraying units shall not exceed 9.3 grams per tire for outside carcass sprays. [40 CFR 60.542(a)(5)(ii)]

G. EUG "TUO": Existing Tire Uniformity Optimization Operations

EU ID#	Point ID#	EU Name	PM_{10}		VOC	
			lb/hr	TPY	lb/hr	TPY
TUO-1	PE-258	TUO Line Group "E"	6.0	26.4	1.1	5.0
TUO-2	PE-259	TUO Line Group "G"				
TUO-3	PE-260	TUO Line Group "D"				
TUO-4	PE-261	TUO Line Group "H"				
TUO-5	PE-262	TUO Line Group "B"				
TUO-6	PE-263	TUO Line Group "C"				
TUO-7	PE-264	TUO Line Group "Y"				
TUO-8	PE-265	TUO Line Group "X"				

i. All tire grinding shall be vented to cyclones or equivalent devices with PM control efficiencies of at least 90%.

H. EUG "WSW": White Sidewall Grinding Operations

EU ID#	Point ID#	EU Name	PM_{10}		VOC	
			lb/hr	TPY	lb/hr	TPY
WSW-1	PE-254	WSW Grinder Group "M"	4.9	21.6	0.9	4.0
WSW-2	PE-255	WSW Grinder Group "J"				
WSW-3	PE-256	WSW Grinder Group "F"				

i. All tire grinding shall be vented to cyclones or equivalent devices with PM control efficiencies of at least 90%.

I. EUG "B1": Boiler B1

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG B1, 60 MMBTUH	4.5	19.6	13.8	48.2	18.0	53.2	0.3	1.3	5.0	17.8

i. Fuel sulfur shall not exceed 0.22% by weight

ii. The unit shall be fueled with natural gas, propane, or fuel oil.

J. EUG "B2": Boiler B2

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG B2, 60 MMBTUH	4.5	19.6	13.8	48.2	18.0	53.2	0.3	1.3	5.0	17.8

i. Fuel sulfur shall not exceed 0.22% by weight

ii. The unit shall be fueled with natural gas, propane, or fuel oil.

K. EUG "B3": Boiler B3

EUG ID	PM_{10}		SO_2		NOx		VOC		CO	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EUG B3, 60 MMBTUH	4.5	19.6	13.8	48.2	18.0	53.2	0.3	1.3	5.0	17.8

i. Fuel sulfur shall not exceed 0.22% by weight

ii. The unit shall be fueled with natural gas, propane, or fuel oil.

L. EUG "GEN": Emergency Generator: Emissions from the equipment listed below are estimated based on existing equipment items and are insignificant.

EU	Point	EU Description	Capacity	Construction Date
GEN-1	GEN-1	Caterpillar D346 (S/N 300PH2014)	350 kW (440 HP)	---

M. EUG "TANKS": Non-NSPS Tanks Emissions from the equipment listed below are estimated based on existing equipment items and are insignificant.

EU	Point	EU Description	Capacity	Construction Date
A	Tank A-1	South solvent tank	8,820 gal.	1991
A	Tank A-2	North solvent tank	8,820 gal.	1991
C	Tank C-1	Vehicle gasoline tank	1,000 gal.	1974
C	Tank C-2	Vehicle diesel tank	1,000 gal.	1974
D	Tank D-1	South pump house diesel tank	350 gal.	1970
D	Tank D-2	North pump house diesel tank	350 gal.	1970
E	Tank E-1	Standby fuel tank	5,754	1991
F	Tank F-1	Emergency fuel storage	420,000 gal.	1973
G	Tank G-1	South pump house diesel tank	350 gal.	1970
G	Tank G-2	North pump house diesel tank	350 gal.	1970
H	Tank H-1	Waste collection tank No. 1	8,820 gal.	1979
H	Tank H-2	Waste collection tank No. 4	8,820 gal.	1982
H	Tank H-3	Waste collection tank No. 3	8,820 gal.	1986
H	Tank H-4	Waste oil skimmer	8,000 gal.	1978
I	Tank I-1	Gear oil bulk storage	8,820 gal.	1981
I	Tank I-2	Hydraulic oil bulk storage	8,820 gal.	1981
J	Tank J-1	Waste pond sludge tank	8,820 gal.	1980
K	Tank K-1	Emergency generator fuel	551 gal.	1970
L	Tank L-1	Membrane shop waste oil	2,220 gal.	1997
M	Tank M-1	Propane	1,000 gal.	1998
M	Tank M-2	Propane	1,000 gal.	1998
M	Tank M-3	Propane	500 gal.	1996
M	Tank M-4	Propane	800 gal.	1996
M	Tank M-5	Propane	1,000 gal.	1996
M	Tank M-6	Compressed gas storage	--	1998

N. EUG "EVAP": Existing Evaporative VOC Emissions

EU ID#	Point ID#	EU Name	VOC	
			lb/hr	TPY
EVAP-1	PE-273	Marking inks	5.6	24.3
EVAP-3	EF	Tire protective coatings		
EVAP-2	EF	Maintenance parts cleaning		

O. EUG "TANKS-1": Tanks Subject to NSPS Subpart Kb

EU	Point	EU Description	Capacity	VOC	
				lb/hr	TPY
B	Tank B-1	North process oil tank	30,000 gal.	0.4	1.8
B	Tank B-2	Middle process oil tank	30,000 gal.		
B	Tank B-3	South process oil tank	17,000 gal.		

i. Tanks B-1, B-2, and B-3 are subject to 40 CFR Part 60, Subpart Kb and shall comply with all applicable requirements.

ii. The permittee shall keep records of the dimensions and capacity of all of the above tanks [40 CFR 60.116b(b)]

iii. The permittee shall keep records of the true vapor pressure of liquids stored in tanks B-2 and B-3 [40 CFR 60.116b(c)]

P. EUG "MIX-2": Modified Rubber Mixing Operations

EUG ID	Point ID	Process Description	PM_{10}		VOC	
			lb/hr	TPY	lb/hr	TPY
MIX2-16	PE-283 PE-284	Mixing Line 13 Silica Silo	2.4	10.4	32.9	144.0
MIX-1	PE-201	Mix Area Vacuum Cleaner				
MIX-5	PE-209 PE-213 PE-202	Mix Line 11				
MIX-6	PE-210 PE-211 PE-214 PE-205	Mix Line 14				

i. The following operations shall utilize specified PM emissions controls or equivalent devices with at least the required control efficiency.

Operation	PM Emission Control Device	Minimum Required Efficiency
Mixing Line 11	baghouse	98%
Mixing area vacuum cleaner	baghouse	98%
Mixing Line 14 pigment	baghouse	98%
Mixing Line 14 carbon black	baghouse	98.5%

Q. EUG "TBLDG-3": No. 4 Sidewall Line

EU ID#	Point ID#	EU Name	VOC	
			lb/hr	TPY
TBLDG-23	EF	Sidewall Line No. 4	0.5	2.1

R. EUG "GTS-2": New Green Tire Spraying Operations

EU ID#	Point ID#	EU Name	PM_{10}		VOC	
			lb/hr	TPY	lb/hr	TPY
GTS2-6	PE-246	GTS Sprayer	3.0	12.6	0.4	1.4
GTS2-7	PE-247	GTS Sprayer				
GTS2-8	PE-278	GTS Sprayer				

i. All spraying shall be vented to cartridge filters or equivalent devices with PM control efficiencies of at least 99%.

ii. VOC emissions from the green tire spraying units shall not exceed 1.2 grams per tire for inside carcass sprays. [40 CFR 60.542(a)(5)(i)]

iii. VOC emissions from the green tire spraying units shall not exceed 9.3 grams per tire for outside carcass sprays. [40 CFR 60.542(a)(5)(ii)]

S. Plant-Wide Total Emissions Limitations

Pollutant	Emissions Limitations, TPY
PM_{10}	147.6
SO_2	144.7
NO_x	160.2
VOC	571.7
CO	53.5

2. The permittee shall be authorized to operate the facility 24 hours per day, every day of the year, up to the following raw material usage rates, 12-month rolling totals: [OAC 252:100-8-6(a)]

Raw Material	Usage Limitations	VOC Content	Solids Content
	Annually		
Royal Seal	5,916,000 lbs	0.042%	--
Rubber solvent (lacolene)	407,088 lbs	100%	--
Green tire carcass spray compound concentrate	680,000 lbs	1.0%	51.6%
Anti-blem spray compound	432,867 lbs	---	28.5%
Bladder spray compound	94,718 lbs	1.2%	--
Inks	11,629 lbs	100%	--
Isopropanol solvent	28,961 lbs	100%	--
Other ink solvents	1,100 lbs	100%	--
Maintenance solvent	3,163 lbs	100%	--
Cured tire protectant spray	64,286 lbs	5.6%	1.1%
Rubber	370,200,000 lbs	--	--
Silane (compounded on-site)	1,580,000 lbs	--	--
Silane (cured on-site)	1,580,000 lbs	--	--

3. Tire production shall not exceed 42,250 tires per day. [OAC 252:100-8-6(a)]

4. Total liquid fuel usage in the three boilers shall not exceed 1,029,377 gallons per year. No more than two boilers shall be operated at a time except in "hot standby" mode while burning liquid fuels. [OAC 252:100-8-6(a)]

5. All records necessary to demonstrate compliance with permit conditions shall be maintained on site for at least five years from the date of recording, and shall be available for review by regulatory personnel during normal business hours. Such records include, but are not necessarily limited to, the following: [OAC 252:100-43]

a. Tire production, both reject and acceptable tires (daily & 12-month rolling totals).

b. Pressure differential of each baghouse (daily when units served are operated).

c. Solvent content of tread-end cementing adhesives and green tire sprays, including, but not limited to, material safety data sheets.

d. Usage of each raw material shown in Specific Condition No. 5 (monthly & 12-month rolling totals).

e. Process rate of the No. 3 tread-end cementer (EUG "TRED3"), including volume of cement used, number of treads processed, and solvent content of cement (monthly & 12-month rolling totals).

f. Usage of liquid fuels in the boilers (monthly & 12-month rolling totals).

g. Sulfur content of each shipment of liquid fuel.

h. Type of solvent used in the parts washers, amounts of solvent used, and amounts recovered for disposal (monthly & 12-month rolling totals).

i. Inspection and maintenance of cyclones used as air pollution controls on grinding operations (monthly).

j. Material safety data sheets or equivalent documentation showing the organic solvent and solids content of the following raw materials: Royal Seal, carcass spray, bladder spray, blem repair ink, rubber ink, cured tired protectant.

k. Records as required by NSPS, Subparts Kb and BBB.

6. The following records shall be maintained on-site to verify insignificant activities.
[OAC 252:100-43]

a. Hours of operation of the emergency generator (cumulative annual)

b. Throughput of fuel dispensing to vehicles (monthly)

c. Kerosene, lacolene, and diesel storage tanks: vapor pressures of liquids stored

d. Parts washers: usage of organic solvents (12-month rolling totals)

e. Throughput of solvents in tanks A-1 and A-2 (monthly and 12-month rolling totals)

f. Number of valves, flanges, etc. associated with propane tanks.

g. Throughput (gallons per month) and oil vapor pressure at the oil-water separators.

7. Upon commencement of construction, this permit will supersede all previous Air Quality permits for this facility which will become null and void.

8. The Permit Shield (Standard Conditions, Section VI) is extended to the following requirements that have been determined to be inapplicable to this facility.
[OAC 252:100-8-6(d)(2)]

a. OAC 252:100-11 Alternative Emissions Reduction

b. OAC 252:100-15 Mobile Sources

c. OAC 252:100-23 Cotton Gins

d. OAC 252:100-24 Grain Elevators

e. OAC 252:100-35 Carbon Monoxide

f. OAC 252:100-47 Landfills

9. No later than 30 days after each anniversary date of the issuance of the facility Title V operating permit, the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of that permit.

[OAC 252:100-8-6 (c)(5)(A) & (D)]

PART 70 PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON STREET, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Issuance Date: _____ **Permit Number:** **2000-128-C (PSD)(M-1)**

Michelin North America, Inc, having complied with the requirements of the law, is hereby granted permission to construct an expansion to their Ardmore tire manufacturing plant, 1100 Uniroyal Road, Ardmore, Carter County

subject to the following conditions, attached:

[X] Standard Conditions dated October 17, 2001

[X] Specific Conditions

In the absence of construction commencement, this permit shall expire 18 months from the issuance date, except as authorized under Section VIII of the Standard Conditions.

_____**Director, Air Quality Division**

Michelin North America
Attn: Mr. David Grimes
1101 Uniroyal Road
Ardmore, OK 73401

Re: Permit Application No. 2000-128-C (PSD) (M-1)
Ardmore Rubber Tire Manufacturing Plant
Section 26 – T4S – R1E
Ardmore, Carter County, Oklahoma

Dear Mr. Grimes:

Enclosed is the permit authorizing construction of the referenced operation. Please note that this permit is issued subject to certain standards and specific conditions, which are attached.

Thank you for your cooperation in this matter. If we may be of further service, please contact our office at (405)702-4100.

Sincerely,

David S. Schutz, P.E.
AIR QUALITY DIVISION
Enclosure