

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

May 20, 2008

**PERMIT TO INSTALL
No.126-06A**



**STATE REGISTRATION NUMBER
B4734**

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: 3/30/2008	
DATE PERMIT TO INSTALL APPROVED: 5/20/2008	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	Btu	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
EPA	Environmental Protection Agency	gr	Grains
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallon of Applied Coating Solids	H ₂ S	Hydrogen Sulfide
GC	General Condition	hp	Horsepower
HAP	Hazardous Air Pollutant	lb	Pound
HVLP	High Volume Low Pressure *	m	Meter
ID	Identification	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	ng	Nanogram
MDEQ	Michigan Department of Environmental Quality	NOx	Oxides of Nitrogen
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM-10	Particulate Matter less than 10 microns diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The AQD District Supervisor shall be notified, in writing, of a change in ownership or operational control of the stationary source or emission unit(s) authorized by this Permit to Install pursuant to R336.1219. The notification shall include all of the information required by R336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R336.1219(1)(c), agreeing to and accepting the terms and conditions of this Permit to Install, and shall notify the AQD District Supervisor of any change in the contact person for this Permit to Install. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law nor does it affect any liability for past violations under the Natural Resources and Environmental Protection Act, 1994 PA 451.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.
11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R336.1303. **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this permit to install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R336.1370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

Emission Unit Identification

Emission Unit ID	Emission Unit Description	Stack or Roof Exhaust Identification
EUTireBuffing	<p>Tire Buffing (Tread Removal): Consists of two SIO Tire Single head Tire Buffers and a material handling system.</p> <p>After the initial inspection of each used tire is completed, the remaining worn tread rubber is removed and the casing surface is prepared to accept the new tread. The rasp moves against the surface of the carcass in a precise programmed pattern. This process is known as a buffing or grinding operation. The rubber removed during the buffing process is collected by a vacuum hood system that encloses the rasp head. The vacuum system is connected to a material handling system that separates the rubber particles and deposits the rubber crumb into a sealed container. The rubber crumb is sold to a rubber recycle center for reprocessing.</p> <p>This process produces PM (rubber), VOC, HAP, TAC and odor emissions. The emissions are from the rubber off-gassing from the heat generated by the actual buffing.</p> <p>The material handling system is vented via exhaust stack.</p>	SVTireBuffing&Repair
EUTireRepair	<p>Repairing & Dissolution Application Area: Consists of three repair stations, three Skive stations, and one fill station.</p> <p>The carcasses marked for repair at initial inspection are now prepared by skilled operators who use hand tools to make repairs to the sidewall, interior, or bead areas. Repair rubber is packed into the repair areas. Dissolution (heptane and rubber mixture) is applied by hand to the repair area to help the repair rubber bond to the carcass. After any necessary repairs, dissolution may be applied by hand to the carcass to refresh it prior to receiving new tread.</p> <p>Heptane (VOC) and HAPs are emitted from this process and vented via common material handling system stack.</p>	SVTireBuffing&Repair

Emission Unit ID	Emission Unit Description	Stack or Roof Exhaust Identification
EUTireBuilding	<p>Pre-Mold Retread Tire Building: Consists of two AZ extruders/builders.</p> <p>The sound carcass is loaded on the pre-mold tire building machine. Fresh rubber (3.3 lbs per tire) is extruded onto the carcass and the pre-cured tread (made and cured at another location) is precisely applied via a computer-controlled operation.</p> <p>This process produces VOC, HAP and TAC emissions. The emissions are from the rubber off-gassing from the heat generated by the pre-mold rubber extrusion.</p> <p>The emissions are vented via roof exhaust fans.</p>	SVTireBld&Curing-01 (Roof Exhaust Fan), SVTireBld&Curing-02 (Roof Exhaust Fan)
EUTireCuring	<p>Tire Curing: Consists of two Cure-tech CTS3000 Chambers and each equipped with a stack.</p> <p>The tire is placed in an envelope and the air is removed by vacuum. The curing chambers are a dry system and are heated by a natural gas hot water heater through a heat exchanger. The tires never come in direct contact with the hot water. Following curing, the tire is sent for final inspection.</p> <p>This process produces VOC, HAP, and TAC emissions. The emissions are from the rubber off-gassing from the heat generated by the rubber curing.</p> <p>The emissions are vented via roof exhaust fan (each chamber is equipped with a roof exhaust fan).</p>	SVTireBld&Curing-01 (Roof Exhaust Fan), SVTireBld&Curing-02 (Roof Exhaust Fan)
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.		

Flexible Group Identification

Flexible Group ID	Emission Units Included in Flexible Group	Stack or Roof Exhaust Identification
FGTireRetreading	<p>Recycling of large truck tires by retreading a previously used tire carcass, <i>i.e.</i> tire retreading via Michelin Retread Technologies.</p> <p>EUTire Buffing, EUTireRepair, EUTireBuilding, and EUTireCuring</p>	As Mentioned Above

The following conditions apply to: FGTireRetreading

Description: Recycling of large truck tires by retreading a previously used tire carcass, *i.e.* tire retreading via Michelin Retread Technologies.

Emission Unit ID: EUTire Buffing, EUTireRepair, EUTireBuilding, and EUTireCuring

Pollution Control Equipment: None for VOC. For PM material handling system shall be use to collect rubber particles (rubber crumb).

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirements
1.1a	VOCs	FGTireRetreading	8.6 tpy	12-month rolling time period as determined at the end of each calendar month	SC 1.8 – SC 1.11	R 336.1225, R 336.1702(a)
1.1b	PM	Tire Buffing portion of the FGTireRetreading	0.1 lbs/1,000 lbs of exhaust gas	Test Protocol	GC 13	R 336.1331
1.1c	PM ₁₀	Tire Buffing portion of the FGTireRetreading	1.8 pph	Test Protocol	GC 13	40 CFR 52.21 (c) & (d), R 336.1901

Material Limits

- 1.2 The permittee shall not use more than 30 grams of tire cement per tire in the FGTireRetreading, with a solvent content of not more than 6.04 pound VOC per gallon of tire cement. **(R 336.1225, R 336.1702(a))**
- 1.3 The permittee shall not process more than 600 tires per day in the FGTireRetreading. **(R 336.1225, R 336.1702(a))**

Process / Operational Limits

- 1.4 The permittee shall capture all waste materials and shall store them in closed containers. The permittee shall dispose of all waste materials in an acceptable manner in compliance with all applicable state rules and federal regulations. **(R 336.1224, R 336.1702(a), R 336.1901)**
- 1.5 The permittee shall handle all VOC and HAP containing materials, including solvents, in a manner to minimize the generation of fugitive emissions. The permittee shall keep containers covered at all times except when operator access is necessary. **(R 336.1225, R 336.1702, R 336.1901)**

Equipment

- 1.6 The permittee shall not operate FGTireRetreading unless the material handling system is installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1702(a), R 336.1901, R 336.1910)**

Testing

- 1.7 The permittee shall determine the VOC content, water content and density of any material, as applied and as received, using federal Reference Test Method 24. Upon prior written approval

by the AQD District Supervisor, the permittee may determine the VOC content from manufacturer's formulation data. If the Method 24 and the formulation values should differ, the permittee shall use the Method 24 results to determine compliance. **(R 336.1225, R 336.1702)**

Recordkeeping /Reporting /Notification

1.8 The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1225, R 336.1702, R 336.1901)**

1.9 The permittee shall maintain a current listing from the manufacturer of the chemical composition of each material, including the weight percent of each component. The data may consist of Material Safety Data Sheets, manufacturer's formulation data, or both as deemed acceptable by the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1225, R 336.1702, R 336.1901)**

1.10 The permittee shall keep the following information on a calendar month basis for FGTireRetreading:

- a) Gallons of each material (e.g. cement) used.
- b) VOC content (with water) of each material as applied.
- c) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
- d) VOC mass emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
- e) Hours of operation.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1225, R 336.1702, R 336.1901)**

1.11 The permittee shall keep the following information for FGTireRetreading:

- a) Number of tires processed per day.
- b) Number of tires processed per calendar month.
- c) Grams of cement per tire

The records shall be kept in a format acceptable to the AQD District Supervisor. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1225, R 336.1901)**

Stack / Vent Restrictions

	Stack or Roof Exhaust ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.12a	SVTireBuffing&Repair	15	19.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
1.12b	SVTireBld&Curing-01 (Roof Exhaust Fan)	26	22.7	
1.12c	SVTireBld&Curing-02 (Roof Exhaust Fan)	26	22.7	
The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.				

