



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: September 21, 2009

RE: Taylor Tire Treading Company / 097-28379-00516

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot12/3/07



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Mr. Jon D. Taylor
Taylor Tire Treading Company
2101 Massachusetts Ave
Indianapolis, IN 46218

September 21, 2009

Re: Exempt Construction and Operation Status,
097-28379-00516

Dear Mr. Jon D. Taylor:

The application from Taylor Tire Treading Company, received on August 25, 2009, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following stationary tire retread operation located at 2101 Massachusetts Ave, Indianapolis, IN is classified as exempt from air pollution permit requirements:

- (a) Two (2) tire grinders, identified as units 001 and 002, constructed in 1983, with a combined maximum capacity of five (5) tires per hour, using an integral grinding dust collection system. The grinding dust collection system collects dust in an enclosed trailer, equipped with filters for particulate control, and exhausting to the atmosphere.
- (b) Seventeen (17) curing stations, identified as units 003 through 019, where units 003 through 016 were constructed in 1983 and units 017 through 019 were constructed in 2003, with a combined maximum capacity of five (5) tires per hour, using no control, and exhausting to the atmosphere.
- (c) One (1) spray coating station, identified as 020, constructed in 1983, with a maximum capacity of five (5) tires per hour, using no control, and exhausting to the atmosphere.
- (d) Cement glue operations, identified as 021, constructed in 1983, using a maximum of 0.36 gallons per day of cement glue (hand brushed), using no control, and exhausting to the atmosphere.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
2. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

A copy of the Exemption is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source. If you have any questions on this matter, please contact Christine L. Filutze, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-233-8397 or at 1-800-451-6027 (ext 38397).

Sincerely,



Alfred C. Dumauval, Ph. D., Section Chief
Permits Branch
Office of Air Quality

ACD/cif

cc: File - Marion County
Marion County Health Department
Compliance and Enforcement Branch
Billing, Licensing and Training Section

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for an Exemption

Source Description and Location
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Source Name:	Taylor Tire Treading Company
Source Location:	2101 Massachusetts Ave, Indianapolis, IN 46218
County:	Marion
SIC Code:	7534
Exemption No.:	097-28379-00516
Permit Reviewer:	Christine L. Filutze

On August 25, 2009, the Office of Air Quality (OAQ) received an application from Taylor Tire Treading Company to revise the emission factors for the tire grinding units.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) MSOP No. 097-18261-00516, issued on January 30, 2004, and
- (b) Exemption No. 097-26761-00516, issued on April 6, 2009.

County Attainment Status

The source is located in Marion County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11 th Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O ₃	Attainment effective November 8, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Attainment effective July 10, 2000, for the part of Franklin Township bounded by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north. Attainment effective July 10, 2000, for the part of Wayne Township bounded by Rockville Road on the north; Girls School Road on the east; Washington Street on the south; and Bridgeport Road on the west. The remainder of the county is not designated.

¹Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM2.5.

- (a) **Ozone Standards**
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Marion County has been designated as

attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM2.5**
Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. On May 8, 2008, U.S. EPA promulgated specific New Source Review rules for PM2.5 emissions, and the effective date of these rules was July 15, 2008. Therefore, direct PM2.5 and SO2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.
- (c) **Other Criteria Pollutants**
Marion County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-1.1-3 (Exemptions) applicability.

Background and Description of Permitted Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by Taylor Tire Treading Company on August 25, 2009, relating to an existing stationary tire retread operation, per IDEM, OAQ's request to revise Taylor Tire Treading Company's potential to emit calculations. Upon further review, it was determined that the units previously permitted as tire buffers should be considered tire grinders, as described in EPA's AP-42, Chapter 4.12 (Manufacture of Rubber Products). Therefore, IDEM has updated the facility descriptions and emission factors accordingly. Taylor Tire Treading also submitted a justification for considering the tire grinding dust collection system as an integral part of the tire grinding operation.

The source consists of the following existing permitted emission units:

- (a) Two (2) tire grinders, identified as units 001 and 002, constructed in 1983, with a combined maximum capacity of five (5) tires per hour, using an integral grinding dust collection system. The grinding dust collection system collects dust in an enclosed trailer, equipped with filters for particulate control, and exhausting to the atmosphere.
- (b) Seventeen (17) curing stations, identified as units 003 through 019, where units 003 through 016 were constructed in 1983 and units 017 through 019 were constructed in 2003, with a combined maximum capacity of five (5) tires per hour, using no control, and exhausting to the atmosphere.
- (c) One (1) spray coating station, identified as 020, constructed in 1983, with a maximum capacity of five (5) tires per hour, using no control, and exhausting to the atmosphere.
- (d) Cement glue operations, identified as 021, constructed in 1983, using a maximum of 0.36 gallons per day of cement glue (hand brushed), using no control, and exhausting to the atmosphere.

“Integral Part of the Process” Determination

Taylor Tire Treading submitted the following justification for considering the tire grinding dust collection system as an integral part of the tire grinding operation:

- (a) The tire grinding dust collection system should be considered an integral part of the tire grinding operation, since there is significant economic benefit gained by collecting the tire grinding dust for

resale. The cost of installing and operating the tire grinding dust collection system and benefit from resale of the collected tire grinding dust are as follows:

- (1) assuming a life span of 10 years, the annualized initial capital costs (equipment and installation) of the tire grinding dust collection system is:
\$9815/10 years = \$982 per year.
- (2) tire grinding dust collection system has an annual operating cost of \$400 per year, consisting only of the electrical cost to operate the collection system blower.
- (3) the collected tire grinding dust is sold for reuse, generating approximately \$14,400 per year (\$1,200 per month) in revenue.

Based on the costs and benefits above, the overall net annualized cost benefit of the tire grinding dust collection system is \$13,018 per year (\$14,400 - \$982 - \$400).

- (b) The high speed shearing action of the tire buffer creates high temperatures and sparks. The simultaneous presence of tire grinding dust and ignition sources may result in fires at the grinding unit. In order to prevent fires, the high pressure vacuum of air, created by the air compressor associated with the tire grinding dust collection system, must be in operation to keep the grinding operation cooled and to reduce the chances of a fire caused from overheating. At the same time, the tire grinding dust, which is considered flammable material, is safely removed from the grinding unit/operation and transferred into the collection system. The tire grinding dust collection system is integral to the process, because it serves a primary purpose other than pollution control. The tire grinding dust collection system is necessary to prevent fires at the grinding unit. Any fire at the grinding unit could cause equipment damage and, therefore, must be prevented.

The constant operation of the tire grinding dust collection system while the grinding unit is in operation would also have an overall positive net economic effect, since it prevents fires that would result in damage to the grinding unit and unplanned shutdowns of the process. Damage to the machinery would result in repair and replacement costs. Process shutdowns would result in loss of revenue. Either of these results would have negative financial impacts on the company.

IDEM, OAQ has evaluated the justification and agreed that the tire grinding dust collection system will be considered as an integral part of the tire grinding operation, since the tire grinding dust collection system has an overwhelming positive net economic effect and is necessary to prevent fires at the grinding unit. Therefore, the permitting level will be determined using the potential to emit after the tire grinding dust collection system. Particulate from the tire grinding operation shall be controlled by the tire grinding dust collection system at all times the tire grinding operation is in operation, and the Permittee shall operate the tire grinding dust collection system in accordance with manufacturer's specifications.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Exemption

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)								
	PM	PM10 *	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Tire Grinding	1.79	1.79	1.79	0.00	0.00	0.17	0.00	0.042	0.04 (4-Methyl-2-pentanone)
Liquid Spray Coating	0.004	0.004	0.004	0.00	0.00	0.13	0.00	0.00	
Cement Glue Operations	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	
Curing	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.149	
Total PTE of Entire Source	1.79	1.79	1.79	0.00	0.00	1.20	0.00	0.19	
Exemptions Levels	5	5	5	10	10	5 or 10	25	25	10
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".									

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of all regulated criteria pollutants are less than the levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3 (Exemptions).
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for the Rubber Tire Manufacturing Industry, 40 CFR 60, Subpart BBB (326 IAC 12), are not included in the permit, since this source retreads tires and does not manufacture tires.
- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Rubber Tire Manufacturing, 40 CFR 63, Subpart XXXX (326 IAC 20-55), are not included in the permit, since this source is not a major source of HAPs, as defined in 40 CFR 63.2.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Rubber Tire Manufacturing, 40 CFR 63.11169-63.11180, Subpart HHHHHH, are not included in the permit, since this area source does not perform paint stripping using chemical strippers that contain methylene chloride for the removal of dried paint, does not perform spray application of coatings to motor vehicles or mobile equipment, and does not perform spray application of coatings that contain chromium, lead manganese, nickel or cadmium to a plastic and/or metal substrates.

- (e) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (f) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

- (a) 326 IAC 2-1.1-3 (Exemptions)
Exemption applicability is discussed under the Permit Level Determination – Exemption section above.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (d) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (f) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.
- (g) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons

per year.

Tire Retreading Operation

- (h) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processing)
The tire retreading operation has potential particulate emissions less than 0.551 pound per hour. Therefore, the tire retreading operation is exempt from 326 IAC 6-3-2.
- (i) 326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
The source is located in Marion County, but is not specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10; and does not have the potential to emit one hundred (100) tons or more, or actual emissions of ten (10) tons or more, of particulate matter per year. Therefore, the tire retreading operation is exempt from 326 IAC 6.5.
- (j) 326 IAC 8-5-4 (Pneumatic Rubber Tire Manufacturing)
The source does not manufacture pneumatic rubber, passenger type tires on a mass production basis. Therefore the tire retreading operation is not subject to the provisions of 326 IAC 8-5-4.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on August 25, 2009.

The operation of this source shall be subject to the conditions of the attached proposed Exemption No. 097-28379-00516. The staff recommends to the Commissioner that this Exemption be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Christine L. Filutze at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-8397 or toll free at 1-800-451-6027 extension 38397.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov.

**Appendix A: Emissions Calculations
Summary**

**Company Name: Taylor Tire Treading Company
Address: 2101 East Massachusetts Ave, Indianapolis, IN 46218
Permit #: 097-28379-00516
Reviewer: Christine L. Filutze
Date: September 4, 2009**

Potential To Emit	Sourcewide Potential Emissions (tons / yr)							
Emissions Unit	PM	PM10/PM2.5	SO2	NOx	VOC	CO	HAP	Single Highest HAP
Tire Grinding	1.79	1.79	0.00	0.00	0.17	0.00	0.042	0.04 4-Methyl-2-pentanone
Liquid Spray Coating	0.004	0.004	0.00	0.00	0.13	0.00	0.00	
Cement Glue Operations	0.00	0.00	0.00	0.00	0.37	0.00	0.00	
Curing	0.00	0.00	0.00	0.00	0.53	0.00	0.149	
Total	1.79	1.79	0.00	0.00	1.20	0.00	0.19	

Notes:

1. Carcass Grinding emission factors from AP-42 Chapter 4.12 were used for the tire grinding calculations.
2. IDEM has determined the Tire Grinding Dust Collection System is integral to the process. Therefore, the potential to emit calculations are after the Tire Grinding Dust Collection System controls.

**Appendix A: Emissions Calculations
VOC Emissions
Tire Grinding and Curing**

**Company Name: Taylor Tire Treading Company
Address City IN Zip: 2101 East Massachusetts Ave, Indianapolis, IN 46218
Permit #: 097-28379-00516
Reviewer: Christine L. Filutze
Date: September 4, 2009**

Tire Grinding

Tires Ground per day	pounds rubber buffed per tire	VOC emissions factor (lb/lb)	VOC emissions (tons/year)
120	15	5.21E-04	0.17

VOC emissions (tons / yr) = tires ground / day * lbs rubber buffed / tire ground * lb VOC / lb rubber buffed * 1 ton / 2000 lbs * 365 days / yr

Curing Process

Tire Cured per day	tire weight (lbs)	VOC emissions factor (lb/lb)	rubber content per tire (lb/lb)	Reduction for pre-curing	VOC emissions (tons/year)
120	125	1.94E-04	1.00	0%	0.53

VOC emissions (tons / yr) = tires cured / day * lbs / tire cured * lbs VOC / lb rubber * lb rubber / lb tire * (1-% reduction) * 365 day / yr * 1 ton / 2000 lbs

Emissions factors developed by the Rubber Manufacturers Association and published in Chapter 4.12 of AP-42. Carcass Grinding emission factors used for tire grinding.

**Appendix A: Emissions Calculations
VOC and Particulate
Liquid Spray Coating and Cement Glue Operations**

**Company Name: Taylor Tire Treading Company
Address City IN Zip: 2101 East Massachusetts Ave, Indianapolis, IN 46218
Permit #: 097-28379-00516
Reviewer: Christine L. Filutze
Date: September 4, 2009**

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Liquid Spray Coating - side wall of tire (black tire paint)	8.85	88.1%	80.1%	8.0%	80.1%	11.9%	0.00833	5.000	3.56	0.71	0.03	0.71	0.13	3.84E-03	5.95	98%
Cement Glue Operations (fiberbond spray type cement - brushed on)	5.98	94.0%	0.0%	94.0%	0.0%	6.00%	0.00300	5.000	5.62	5.62	0.08	2.02	0.37	0.00	93.69	100%

0.11 2.73 0.50 3.84E-03

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Assume PM=PM10=PM2.5

Liquid Spray Coating and Cement Glue contain no HAPs.

**Appendix A: Emissions Calculations
PM Emissions
Grinding**

**Company Name: Taylor Tire Treading Company
Address City IN Zip: 2101 East Massachusetts Ave, Indianapolis, IN 46218
Permit #: 097-28379-00516
Reviewer: Christine L. Filutze
Date: September 4, 2009**

Tire Grinding

	Tires Ground per day	pounds rubber removed per tire (lb/tire)	PM emissions factor (lb PM/lb buffed)	PM emissions before shaving (tons/year)	Tire Grinding Dust Collection System Control Efficiency	Controlled PM emissions after shaving (tons/yr)
Potential	120	15	5.45E-01	179.03		
Controlled	120	15	5.45E-01	179.03	99%	1.79

PM emissions (tons / yr) = tires ground / day * lbs rubber buffed / tire ground * lb PM / lb rubber buffed
* (1-% reduction for shaving) * 1 ton / 2000 lbs * 365 days / yr

Controlled PM emissions (tons / yr) = tires ground / day * lbs rubber buffed / tire ground * lb PM / lb rubber buffed
* (1-% reduction for shaving) * 1 ton / 2000 lbs * 365 days / yr * (1-.99)

Emissions factors developed by the Rubber Manufacturers Association and published in Chapter 4.12 of AP-42.
Carcass Grinding emission factors used for tire grinding.
Assume PM=PM10=PM2.5 for all PM calculations

Note:

IDEM has determined the Tire Grinding Dust Collection System is integral to the process.
Therefore, the potential to emit calculations are after the Tire Grinding Dust Collection System controls.

Company Name: Taylor Tire Treading Company
Address: 2101 East Massachusetts Ave, Indianapolis, IN 46218
Permit #: 097-28379-00516
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Date: September 4, 2009

Analyte Name	CAS #	HAP emissions (tons/year)	HAPs Grinding + Curing
Total (Unspeciated)		0.041571675	0.190
		0.14864625	
4-Methyl-2-pentanone	108-10-1	0.006295175	0.041
		0.0344925	
m-Xylene + p-Xylene		0.000731254	0.035
		0.0344925	
Toluene	108-88-3	0.00206955	0.021
		0.018834	
Aniline	62-53-3	0.00648285	0.016
		0.009772875	
Carbon Disulfide	75-15-0	0.000846297	0.013
		0.0125925	
Ethylbenzene	100-41-4	0.01012875	0.010
		0.005239959	
Hexane	110-54-3	0.00432525	0.010
		0.008693207	
1,3-Butadiene	106-99-0	0.00837675	0.009
o-Xylene	95-47-6	0.00082125	
Methylene Chloride	75-09-2	0.00596775	0.006
		0.002609454	
bis(2-Ethylhexyl)phthalate	117-81-7	0.0016206	0.004
		0.003580746	
Isooctane	540-84-1	0.002858258	0.003
Carbonyl Sulfide	463-58-1	0.00135521	
Benzene	71-43-2	0.000659738	0.002
		0.000736674	
Di-n-butylphthalate	84-74-2	0.00123735	0.002
		0.000168564	
2-Butanone	78-93-3	0.001470038	0.002
		0.000544325	
Phenol	108-95-2	0.001059413	0.002
		0.001289363	
Styrene	100-42-5	0.000836433	0.001
o-Toluidine	95-53-4	2.76E-04	
Acrolein	107-02-8	0.000553395	9.04E-04
		3.50E-04	
Trichloroethene	79-01-6	0.000641578	7.42E-04
		1.01E-04	
Nickel (Ni) Compounds		0.000667989	6.68E-04
Lead (Pb) Compounds		0.000664807	6.65E-04
Acetophenone	98-86-2	0.00023411	5.63E-04
		3.29E-04	
Naphthalene	91-20-3	0.000190907	5.30E-04
		3.39E-04	
Chromium (Cr) Compounds		0.000472752	4.73E-04
Cumene	98-82-8	3.72E-04	3.72E-04
1,1,1-Trichloroethane	71-55-6	0.000117552	3.71E-04
		2.54E-04	
Cadmium (Cd) Compounds		0.00028173	2.82E-04
Chloromethane	74-87-3	1.29E-04	1.29E-04
Biphenyl	92-52-4	1.09E-04	1.09E-04
Dibenzofuran	132-64-9	5.22066E-05	7.91E-05
		2.69E-05	
Dimethylphthalate	131-11-3	5.72E-05	5.72E-05
Isophorone	78-59-1	2.09E-05	2.09E-05
1,4-Dichlorobenzene	106-46-7	1.86E-05	1.86E-05
2-Methylphenol	95-48-7	1.81E-05	1.81E-05
1,2,4-Trichlorobenzene	120-82-1	7.09E-06	7.09E-06
		Total Speciated	0.196

**Appendix A: Emissions Calculations
Speciated HAPs Tire Grinding**

**Company Name: Taylor Tire Treading Company
Address: 2101 East Massachusetts Ave, Indianapolis, IN 46218
Permit #: 097-28379-00516
Reviewer: Christine L. Filutze
Date: September 4, 2009**

Tires Ground Per Day 120
Pounds of Rubber Ground Per Day 15

Analyte Name	CAS #	Carcass 30800152 (lb/lb) rubber removed	HAP emissions (tons/year)
Total (Unspeciated)		1.27E-04	0.042
1,1,1-Trichloroethane	71-55-6	3.58E-07	1.176E-04
1,3-Butadiene	106-99-0	2.65E-05	0.009
2-Butanone	78-93-3	5.13E-07	1.686E-04
4-Methyl-2-pentanone	108-10-1	1.92E-05	0.006
Acetophenone	98-86-2	7.13E-07	2.341E-04
Acrolein	107-02-8	1.68E-06	0.001
Aniline	62-53-3	1.97E-05	0.006
Benzene	71-43-2	4.13E-06	0.001
bis(2-Ethylhexyl)phthalate	117-81-7	7.94E-06	0.003
Cadmium (Cd) Compounds		8.58E-07	2.817E-04
Carbon Disulfide	75-15-0	2.58E-06	0.001
Carbonyl Sulfide	463-58-1	8.70E-06	0.003
Chromium (Cr) Compounds		1.44E-06	4.73E-04
Di-n-butylphthalate	84-74-2	2.24E-06	0.001
Dibenzofuran	132-64-9	1.59E-07	5.22E-05
Hexane	110-54-3	1.60E-05	0.005
Isooctane	540-84-1	1.09E-05	0.004
Lead (Pb) Compounds		2.02E-06	0.001
m-Xylene + p-Xylene		2.23E-06	0.001
Methylene Chloride	75-09-2	2.50E-07	8.21E-05
Naphthalene	91-20-3	5.81E-07	1.91E-04
Nickel (Ni) Compounds		2.03E-06	0.001
o-Toluidine	95-53-4	2.55E-06	0.001
Phenol	108-95-2	1.66E-06	0.001
Toluene	108-88-3	6.30E-06	0.002
Trichloroethene	79-01-6	1.95E-06	0.001
Total Speciated			0.047

Methodology

Emissions factors developed by the Rubber Manufacturers Association and published in Chapter 4.12 of AP-42.
Carcass Grinding emission factors used for tire grinding.

HAP emissions (tons / yr) = tires ground / day * lbs rubber ground / tire ground
* lb HAP / lb rubber ground * 1 ton / 2000 lbs * 365 days / yr

**Appendix A: Emissions Calculations
Speciated HAPs Tire Curing**

**Company Name: Taylor Tire Treading Company
Address: 2101 East Massachusetts Ave, Indianapolis, IN 46218
Permit #: 097-28379-00516
Reviewer: Christine L. Filutze
Date: September 4, 2009**

Tires Cured Per Day 120
Tire Weight (lbs) 125
Rubber Content Per Tire (lb/lb) 1.00
Reduction for Pre-Curing 0

Analyte Name	CAS #	Replacement 195/75 (lb/lb) rubber	HAP emissions (tons/year)
Total HAPs (Unspeciated)		5.43E-05	0.149
1,1,1-Trichloroethane	71-55-6	9.27E-08	2.54E-04
1,2,4-Trichlorobenzene	120-82-1	2.59E-09	7.09E-06
1,4-Dichlorobenzene	106-46-7	6.80E-09	1.86E-05
2-Butanone	78-93-3	5.37E-07	0.001
2-Methylphenol	95-48-7	6.63E-09	1.81E-05
4-Methyl-2-Pentanone	108-10-1	1.26E-05	0.034
Acetophenone	98-86-2	1.20E-07	3.29E-04
Acrolein	107-02-8	1.28E-07	3.50E-04
Aniline	62-53-3	3.57E-06	0.010
Benzene	71-43-2	2.41E-07	0.001
Biphenyl	92-52-4	3.97E-08	1.09E-04
bis(2-Ethylhexyl)phthalate	117-81-7	5.92E-07	0.002
Carbon Disulfide	75-15-0	4.60E-06	0.013
Chloromethane	74-87-3	4.70E-08	1.29E-04
Cumene	98-82-8	1.36E-07	3.72E-04
Di-n-butylphthalate	84-74-2	4.52E-07	0.001
Dibenzofuran	132-64-9	9.81E-09	2.69E-05
Dimethylphthalate	131-11-3	2.09E-08	5.72E-05
Ethylbenzene	100-41-4	3.70E-06	0.010
Hexane	110-54-3	1.58E-06	0.004
Isophorone	78-59-1	7.62E-09	2.09E-05
m-Xylene + p-Xylene		1.26E-05	0.034
Methylene Chloride	75-09-2	2.18E-06	0.006
Naphthalene	91-20-3	1.24E-07	3.39E-04
o-Toluidine	95-53-4	1.01E-07	2.76E-04
o-Xylene	95-47-6	3.06E-06	0.008
Phenol	108-95-2	3.87E-07	0.001
Styrene	100-42-5	4.71E-07	0.001
Toluene	108-88-3	6.88E-06	0.019
Trichloroethene	79-01-6	3.68E-08	1.01E-04
Total Speciated			0.149

Methodology

Emissions factors developed by the Rubber Manufacturers Association and published in Chapter 4.12 of AP-42.

HAP emissions (tons / yr) = tires cured / day * lbs / tire cured * lbs HAP / lb rubber
* lb rubber / lb tire * (1- % reduction) * 365 day / yr * 1 ton / 2000 lbs



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Jon Taylor
Taylor Tire Treading Company
2101 Massachusetts Ave
Indianapolis, IN 46218

DATE: September 21, 2009

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Exemption
097-28379-00516

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	GHOTOPP 9/21/2009 Taylor Tire Treading Company 097-28379-00516 Final		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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1		Jon Taylor Taylor Tire Treading Company 2101 Massachusetts Ave Indianapolis IN 46218 (Source CAATS) via confirmed delivery										
2		Marion County Health Department 3838 N. Rural St Indianapolis IN 46205-2930 (Health Department)										
3		Mrs. Sandra Lee Watson 7834 E 100 S Marion IN 46953 (Affected Party)										
4		Indianapolis City Council and Mayors Office 200 East Washington Street, Room E Indianapolis IN 46204 (Local Official)										
5		Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 (Local Official)										
6		Ms. Janet McCabe Improving Kids Environment 3951 N Meridian Street Suite 160 Indianapolis IN 46208-4062 (Affected Party)										
7		Matt Mosier Office of Sustainability 2700 South Belmont Ave. Administration Bldg. Indianapolis IN 46221 (Local Official)										
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