MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

September 2, 2008

PERMIT TO INSTALL
160-08

ISSUED TO
Wolverine World Wide, Inc.

LOCATED AT
1005 Baldwin
Big Rapids, Michigan

IN THE COUNTY OF
Mecosta

STATE REGISTRATION NUMBER
B2981

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: **July 8, 2008**	
DATE PERMIT TO INSTALL APPROVED: **September 2, 2008**	SIGNATURE: **Mary Ann Dolehanty**
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations{ TC "Alphabetical Listing of Common Abbreviations / Acronyms" \f C \l "1" **}**
/ 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_2S	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	NO_x	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{ TC "General Conditions" \f C \l "1" **}**

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 R 336.1210, 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 R 336.1219. The notification shall include all of the information required by R 336.1219(1)(a) and (b). In addition, a new owner or operator must submit a written statement pursuant to R 336.1219(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 R 336.1301, 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 R 336.1303. **(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 R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

Emission Unit Identification{ TC "Emission Unit Identification" \f C \l "1" **}**

Emission Unit ID	Emission Unit Description	Stack Identification
EUDCPARTICULATE	Process equipment that exhausts through a single cyclone dust collector.	SV-VDC
EUWCPARTICULATE	Process equipment that exhausts through a Roto-clone wet dust collector.	SV-VWC
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{ TC "Flexible Group Identification" \f C \l "1" **}**

Flexible Group ID	Emission Units Included in Flexible Group	Stack Identification
FGFACILITY	All process equipment at the stationary source including equipment covered by other permits, grandfathered equipment and exempt equipment.	NA

The following conditions apply to{ TC "Emission Unit Special Conditions" \f C \l "1" **}: EUDCPARTICULATE**

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirements
1.1a	Particulate Matter	EUDCPARTICULATE	0.1 lbs per 1000 lbs of exhaust gases*	At all times	General Condition No. 13	R 336.1331(1)(a)(j)
1.1b	Particulate Matter	EUDCPARTICULATE	2.48 pounds	Per hour averaged over a 24-hour period.	General Condition No. 13	R 336.1331(1)(c)
1.1c	Particulate Matter	EUDCPARTICULATE	7.1 tons	12-month rolling time period as determined at the end of each calendar month	General Condition No. 13	R 336.1331(1)(c)
	* Calculated on a dry gas basis.					

Process / Operational Limits

1.2 The permittee shall maintain and operate EUDCPARTICULATE according to the procedures outlined in the preventative maintenance plan attached as Appendix A. **(R 336.1205(3), R 336.1910, R 336.1911)**

Equipment

1.3 The permittee shall not operate EUDCPARTICULATE unless the cyclone dust collector is installed, maintained, and operated in a satisfactory manner. **(R 336.1910)**

Recordkeeping /Reporting /Notification

1.4 The permittee shall keep, in a satisfactory manner, weekly, monthly, and quarterly records of checks pursuant to the approved Preventative Maintenance Plan per Appendix A. 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 336.1205(3), R 336.1910, R 336.1911)**

1.5 The permittee shall keep the following records for repairs pursuant to the approved Preventative Maintenance Plan per Appendix A:

a) Date and time problem noted.

b) Date and time repairs made.

c) Identification of staff performing repairs.

The permittee shall keep the records on file, in a format acceptable to the AQD District Supervisor, for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.1910, R 336.1911)**

Stack / Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
1.6	SV-VDC	48	33	R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
	The exhaust gases may be discharged downwards.			

The following conditions apply to{ TC "Emission Unit Special Conditions" \f C \l "1" **}:**
EUWCPARTICULATE

Emission Limits

	Pollutant	Equipment	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirements
2.1a	Particulate Matter	EUWCPARTICULATE	0.1 lbs per 1000 lbs of exhaust gases*	At all times	General Condition No. 13	R 336.1331(1)(a)(j)
2.1b	Particulate Matter	EUWCPARTICULATE	2.52 pounds	Per hour averaged over a 24-hour period.	General Condition No. 13	R 336.1331(1)(c)
2.1c	Particulate Matter	EUWCPARTICULATE	7.2 tons	12-month rolling time period as determined at the end of each calendar month	General Condition No. 13	R 336.1331(1)(c)
	* Calculated on a dry gas basis.					

Process / Operational Limits

2.2 The permittee shall maintain and operate EUWCPARTICULATE according to the procedures outlined in the preventative maintenance plan attached as Appendix A. **(R 336.1205(3), R 336.1910, R 336.1911)**

Equipment

2.3 The permittee shall not operate EUWCPARTICULATE unless the Roto-clone wet dust collector is installed, maintained, and operated in a satisfactory manner. **(R 336.1910)**

Recordkeeping /Reporting /Notification

2.4 The permittee shall keep, in a satisfactory manner, weekly, monthly, and quarterly records of checks pursuant to the approved Preventative Maintenance Plan per Appendix A. 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 336.1205(3), R 336.1910, R 336.1911)**

2.5 The permittee shall keep the following records for repairs pursuant to the approved Preventative Maintenance Plan per Appendix A:

a) Date and time problem noted.

b) Date and time repairs made.

c) Identification of staff performing repairs.

The permittee shall keep the records on file, in a format acceptable to the AQD District Supervisor, for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), R 336.1910, R 336.1911)**

Stack / Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirement
2.6	SV-VWC	18x38	33	R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.			

The following conditions apply to{ TC "Flexible Group Special Conditions" \f C \l "1" **}:**
FGFACILITY

Emission Limits

	Pollutant	Limit	Time Period	Equipment	Testing/ Monitoring Method	Applicable Requirements
3.1a	Each Individual HAP	Less than 10.0 tpy *	Annually based on a 13-period rolling time frame, as determined at the end of each 4-week period	FGFACILITY	SC 3.10	R 336.1205(1)
3.1b	Aggregate HAPs	Less than 25.0 tpy *	Annually based on a 13-period rolling time frame, as determined at the end of each 4-week period	FGFACILITY	SC 3.10	R 336.1205(1)
3.1c	VOCs	Less than 100.0 tpy	Annually based on a 13-period rolling time frame, as determined at the end of each 4-week period	FGFACILITY	SC 3.11	R 336.1205(1)
	* Beginning on the date this permit is approved, and continuing for the first thirteen 4-week periods, this limit applies to the cumulative total HAP emissions. Thereafter, the limit shall become a 13-period rolling limit.					

Material Limits

3.2 The permittee shall not produce more than 2,900,000 pairs of shoes and boots per 13-period rolling time frame, as determined at the end of each 4-week period. **(R 336.1205(1))**

Process / Operational Limits

3.3 The permittee shall dispose of spent filters in a manner which minimizes the introduction of air contaminants to the outer air. **(R 336.1224, R 336.1370)**

3.4 The permittee shall maintain and operate FGFACILITY according to the procedures outlined in the preventative maintenance plan attached as Appendix A. **(R 336.1205(1), R 336.1910, R 336.1911)**

Equipment

3.5 The permittee shall not operate any spray booth portion of FGFACILITY unless its respective exhaust filters are installed, maintained and operated in a satisfactory manner. **(R 336.1224, R 336.1901, R 336.1910)**

3.6 The permittee shall equip and maintain each spray booth portion of FGFACILITY with high volume low pressure (HVLP) spray guns or comparable technology with equivalent transfer efficiency. For HVLP applicators, the permittee shall keep test caps available for pressure testing. **(R 336.1702(a))**

Testing

3.7 The permittee shall determine the HAP content of any material as received and as applied, using manufacturer's formulation data. Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's HAP formulation data using EPA Test Method 311. **(R 336.1205(1))**

3.8 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 336.1205(1))**

Recordkeeping / Reporting / Notification

3.9 The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the end of the third week, for the previous 4-week period, unless otherwise specified in any recordkeeping, reporting or notification special condition. **(R 336.1205(1))**

3.10 The permittee shall keep the following information on a 4-week period basis for FGFACILITY:

a) Gallons or pounds of each HAP containing material used.

b) Where applicable, gallons or pounds of each HAP containing material reclaimed.

c) HAP content, in pounds per gallon or pounds per pound, of each HAP containing material used.

d) Individual and aggregate HAP emission calculations determining the total emission rate of each in tons per 4-week period.

e) Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 13-period rolling time frame as determined at the end of each 4-week period. For the 4-week period following permit issuance, the calculations shall include the summation of emissions from the twelve 4-week periods immediately preceding the issuance date. For each 4-week period thereafter, calculations shall include the summation of emissions for the appropriate number of 4-week periods prior to permit issuance plus the 4-week periods following permit issuance for a total of 13 consecutive periods.

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 336.1205(1))**

3.11 The permittee shall keep the following information on a 4-week period basis for FGFACILITY:

a) Gallons or pounds of each VOC containing material used.

b) Where applicable, gallons or pounds of each VOC containing material reclaimed.

c) VOC content, in pounds per gallon or pounds per pound, of each VOC containing material used.

d) VOC emission calculations determining the total emission rate in tons per 4-week period.

e) VOC emission calculations determining the annual emission rate in tons per 13-period rolling time frame as determined at the end of 4-week period.

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 336.1205(1))**

3.12 The permittee shall keep the following information on a 4-week period basis for FGFACILITY:

a) The total number of pairs of shoes and boots produced per 4-week period.

b) The total number of pairs of shoes and boots produced per 13-period rolling time frame as determined at the end of 4-week period.

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 336.1205(1))**

3.13 The permittee shall keep, in a satisfactory manner, weekly, monthly, and quarterly records of checks pursuant to the approved Preventative Maintenance Plan per Appendix A. 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 336.1205(1), R 336.1910, R 336.1911)**

3.14 The permittee shall keep the following records for repairs pursuant to the approved Preventative Maintenance Plan per Appendix A:

a) Date and time problem noted.

b) Date and time repairs made.

c) Identification of staff performing repairs.

The permittee shall keep the records on file, in a format acceptable to the AQD District Supervisor, for a period of at least five years and make them available to the Department upon request. **(R 336.1205(1), R 336.1910, R 336.1911)**

APPENDIX{ TC "Appendices" \f C \l "1" **} A**
Preventative Maintenance Plan

The facility shall maintain and implement a preventative maintenance plan. This plan shall contain, at a minimum, the following information. Any changes to the plan shall be submitted to the District Supervisor.

1. Check Coating lines weekly, or more frequently if needed, for:
    a) Any problems with the equipment while running
    b) Properly placed and clean filters
    c) Spray guns for proper flow

2. Check Cyclone and Roto-clone weekly for:
    a) Excessive visible emissions

3. Check Cyclone and Roto-clone monthly for:
    a) External leaks
    b) Clogged systems

4. Check Cyclone quarterly for excessive wear on (and replace as needed):
    a) bags
    b) tension rings
    c) retainer plates
    d) air valves
    e) filters

5. Conduct repairs as needed.