MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

July 8, 2008

PERMIT TO INSTALL
No. 105-08

ISSUED TO
Dorsey Company.

LOCATED AT
1865 Wicco Drive
Saginaw, Michigan 48601

IN THE COUNTY OF
Saginaw

STATE REGISTRATION NUMBER
N8036

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: **5/22/2008**	
DATE PERMIT TO INSTALL APPROVED: **7/8/2008**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

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_2S	Hydrogen sulfide
GC	General Condition	hp	Horsepower
HAP	Hazardous Air Pollutant	lb	Pound
HMA	Hot Mix Asphalt	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	NO_x	Oxides of nitrogen
MAP	Malfunction Abatement Plan	PM	Particulate matter
MDEQ	Michigan Department of Environmental Quality	PM-10	Particulate matter less than 10 microns aerodynamic diameter
MSDS	Material Safety Data Sheet	pph	Pound per hour
NESHAP	National Emission Standard for Hazardous Air Pollutants	ppm	Parts per million
NSPS	New Source Performance Standards	ppmv	Parts per million by volume
NSR	New Source Review	ppmw	Parts per million by weight
PS	Performance Specification	psia	Pounds per square inch absolute
PSD	Prevention of Significant Deterioration	psig	Pounds per square inch gauge
PTE	Permanent Total Enclosure	scf	Standard cubic feet
PTI	Permit to Install	sec	Seconds
RACT	Reasonably Available Control Technology	SO_2	Sulfur dioxide
RAP	Reclaimed Asphalt Pavement	THC	Total hydrocarbons
ROP	Renewable Operating Permit	tpy	Tons per year
RUO	Recycled Used Oil	µg	Microgram
SC	Special Condition Number	VOC	Volatile organic compounds
SCR	Selective Catalytic Reduction	yr	Year
SRN	State Registration Number		
TAC	Toxic Air Contaminant		
VE	Visible Emissions		

* 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 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

Emission Unit ID	Emission Unit Description	Stack Identification
EU – Process	Material sorting and separation Grinding with Bandit Beast 3680 grinder (630 HP Caterpillar engine) with liquid spray for dust suppression. Equipment includes areas and methods used to sort useable shingles from scrap material, material handling and transporting of material to storage areas. Control methods may include equipment enclosures, water sprays, drop chutes and/or pant legs for transfer points and work practices to minimize the generation of fugitive dust.	N/A – None
EU – Truck Traffic	Truck traffic for transfer of material to and from the facility and loader traffic associated with processing equipment, storage pile handling and loading delivery trucks. All commercial truck areas and unpaved yard areas.	N/A – None
EU – Storage	Protected area stock piles of unprocessed shingles and ground shingle product material.	N/A – None
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.		

The following conditions apply to: EU - Process

Visible Emission Limits

1.1 Visible emissions from the drop point and transfer point portions of EU – Process shall not exceed 10 percent opacity. **(R 336.1301)**

Material Usage Limits

1.2 The permittee shall not process any asbestos tailing or asbestos containing waste materials in EU - Process pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61 Subpart M. **(40 CFR Part 61 Subpart M)**

1.3 The permittee shall process only shingle manufacturer by-product shingle waste material (end cuts) or clean tear-off asphalt shingle scrap material in EU - Process. The material processed in EU - Process must meet the standards specified in the following table:

Acceptable Material	Asphalt shingle manufacturer by-product (end cuts) Tear-off asphalt shingle scrap and other incidental roofing waste from private, residential homes only, no larger than four-units per structure. Processing of incidental roofing waste shall be minimized, but less than 2 percent by weight of material such as felt attached to shingles, wood, cardboard, flashing, nails, or plastic wrap may be processed. Shingles shall meet the American Society for Testing and Materials (ASTM) specifications for roofing shingles: ASTM D 225-86 (Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules) or ASTM D3462-87 (Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules).
Prohibited Material	Unacceptable materials include: household trash, paint, solvents, gasoline, anti-freeze, dead animals, asbestos, explosives, or any other material deemed hazardous or inappropriate by the AQD District Supervisor." The following materials shall not be processed: 1. Cementitious shingles, shake shingles, and transite siding that may be suspect asbestos containing material. 2. Roll roofing, built-up roofing, tile, cedar shake shingles, coal tar, rubber, slate, or metal roofing or roofing from commercial buildings 3. Any type of hazardous waste (e.g., mercury containing devices such as thermostats, paint, solvents or other volatile liquids, etc.). 4. Significant amounts (more than 2 percent by weight) of other debris that is not asphalt shingles (e.g., plastic, paper, glass, metal, or trash). 5. Shingles from renovation / demolition sites from: • Institutional, commercial, public, industrial buildings. • Residential buildings consisting of more than four individual dwelling units. • All residential buildings (even if a building consists of four individual dwelling units or less) that is a part of a larger project (e.g. municipal demolition). • Buildings or structures regulated by 40 CFR, Part 61, Subpart M, Asbestos NESHAP. The following items shall be separated, to an extent acceptable to the AQD district supervisor, from the shingles before processing: Wood Metal flashings, gutters, etc Nails (best effort) Plastic wrap, buckets Paper waste Other garbage, trash or dirt

(R 336.1201(3), R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901)

Process/Operational Limits

1.4 The permittee shall not process more than 52,000 tons of shingles per year through EU – Process. **(R 336.1901)**

1.5 The permittee shall not operate EU - Process unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **(R 336.1371, R 336.1901)**

Equipment

1.6 The permittee shall not operate any portion of EU – Process unless the equipment's specified particulate matter control device is installed, maintained and operated in a satisfactory manner. **(R 336.1901, R 336.1910)**

Testing

1.7 Within 60 days after achieving maximum production rate, but not later than 180 days after commencement of trial operation, the permittee shall evaluate visible emissions from EU - Process, at owner's expense. The permittee must have prior approval from the AQD for visible emission observation procedures. Verification of visible emissions includes the submittal of a complete report of opacity observations to the AQD within 45 days following the last date of the evaluation. **(R 336.1301)**

1.8 The permittee shall sample and test each type of tear-off shingle material in accordance with the sampling protocol outlined in Appendix B. The presence of asbestos shall be analyzed using the polarized light microscopy (PLM) methods [EPA Method 600/R-93/116] as per NESHAP 40 CFR Part 61 Subpart M using an accredited laboratory or personnel certified to conduct PLM, Method 600. The permittee shall document and maintain adequate records of the results of analyses and make the records available to the department upon request. **(40 CFR Part 61 Subpart M)**

1.9 The permittee shall not operate EU – Process unless the sampling and testing plan outlined in Appendix B is implemented. **(40 CFR Part 61 Subpart M)**

Monitoring

1.10 The permittee shall install and maintain a belt scale on the transfer conveyor portion of EU - Process which continuously shows the daily throughput rate for the conveyor. **(R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

Recordkeeping/Reporting/Notification

1.11 Each load of material accepted for recycling shall be inspected by personnel trained to visually detect possible Asbestos Containing Material.

1.12 The permittee shall obtain from the roofing company or other supplier of tear-off shingles accepted for recycling a signed certification including the following information:

a. Supplier name, address, contact person, and telephone number
b. A statement that the tear-off shingle scrap was generated at private, residential homes only, no larger than four-units per structure, and that the residential buildings are not regulated facilities under the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61 Subpart M.
c. Residential re-roof customer address(es) where the tear-off shingle scrap originated
d. A statement that the roofing waste material consists of asphalt shingles and associated roofing debris and contains no hazardous material.

(R 336.1201(3), R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1901, 40 CFR Part 61 Subpart M)

1.13 The permittee shall keep daily and monthly records of the amount of material processed through EU – Process. Further the permittee shall calculate on a monthly basis, the yearly throughput rate based upon the most recent 12-month rolling time period. The permittee shall keep records of the amount of material processed on file for a period of at least five years and make them available to the Department upon request. **(R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))**

1.14 Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EU – Process. **(R 336.1216(1), R 336.1201(7)(a))**

Equipment Location

1.15 The permittee shall locate the grinder described in EU - Process no closer than approximately 300 feet from the nearest residential lot or in a centrally located position on the site. **(R 336.1901)**

The following conditions apply to: EU – Truck Traffic

Visible Emission Limits

2.1 Visible emissions from all wheel loaders and all truck traffic, operated in conjunction with EU – Truck Traffic, shall not exceed 5 percent opacity. **(R 336.1301, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

Process/Operational Limits

2.2 The permittee shall not operate EU – Truck Traffic unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **(R 336.1371, R 336.1372, Act 451 324.5521)**

The following conditions apply to: EU - Storage

Visible Emission Limits

3.1 Visible emissions from each of the material storage piles maintained under EU - Storage shall not exceed 5 percent opacity. **(R 336.1301, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

Process/Operational Limits

3.2 The permittee shall not operate EU - Storage unless the program for continuous fugitive emissions control for all plant roadways, the plant yard, all material storage piles, and all material handling operations specified in Appendix A has been implemented and is maintained. **(R 336.1371, R 336.1372, Act 451 324.5521)**

3.3 The height of any material storage pile shall not exceed 20 feet above ground level. **(R 336.1301)**

APPENDIX A

Fugitive Dust Control Plan

I. Site Roadways / Plant Yard

A. The dust on the site roadways and the plant yard shall be controlled by applications of water, calcium chloride or other acceptable and approved fugitive dust control compounds. Applications of dust suppressants shall be done as often as necessary to meet all applicable emission limits. A record of all watering/dust suppressant applications shall be kept on file and be made available to the AQD upon request.

B. All paved roadways and the plant yards shall be swept as needed, at least once per week, between applications of dust suppressants. A record of all sweeping activities shall be kept on file and be made available to the AQD upon request.

C. Any material spillage on roads shall be cleaned up immediately.

II. Plant

The drop distance at each transfer point shall be reduced to the minimum the equipment can achieve. The transfer point from the re-circulating belt to the feed belt shall be equipped with an enclosed chute.

III. Storage Piles

A. Stockpiling of all nonmetallic minerals shall be performed to minimize drop distance and control potential dust problems.

B. Stockpiles shall be watered on an as needed basis in order to meet the opacity limit of 5 percent. Equipment to apply water or dust suppressant shall be available at the site or on call for use at the site within a given operating day. A record of all watering/dust suppressant applications shall be kept on file and be made available to the AQD upon request.

C. Stockpiles shall be tarped after business hours.

IV. Truck Traffic

On-site vehicles shall be loaded to prevent their contents from dropping, leaking, blowing or otherwise escaping. This shall be accomplished by loading so that no part of the load shall come in contact within 6 inches of the top of any side board, side panel or tailgate. Otherwise, the truck shall be tarped. The speed of vehicles on the site will be limited to 5 miles per hour or less. The permittee shall post signs to advise drivers of the speed limitation.

The permittee shall develop and implement a dirt track-out control program, including records of actions taken to control track-out. If required by the AQD District Supervisor, the permittee shall install, maintain and properly operate as needed a wheel wash system to control dirt track-out.

V. AQD/MDEQ Inspection

The provisions and procedures of this plan are subject to adjustment by written notification from the AQD if, following an inspection, the AQD finds the fugitive dust requirements and/or permitted emission limits are not being met.

APPENDIX B

Asbestos Management Plan

Dorsey Company. has researched and developed an asbestos management plan to comply with the standards set by the Michigan Department of Environmental Quality (MDEQ). This plan will also provide product quality assurance to our end customers that they are receiving a clean and asbestos free product.

1. Sampling Intervals and Testing Period

a. Dorsey Company in agreement with the MDEQ will perform one mandatory asbestos test of one sample for every 100 tons of shingles received. This sample shall include a composite of all layers of shingles in the container from which the sample is collected.

b. All loads received will be visually inspected by trained asbestos inspectors. If any incoming loads between mandatory testing intervals is believed to be an asbestos containing material (ACM) it will be tested before processing or turned away to landfills.

c. All test results and paperwork will be kept on file for review.

d. Sampling frequency may need to be periodically adjusted based on sample analysis results; the adjustment in sampling frequency may be recommended by the facility owner/operator or the MDEQ-AQD and approved by the AQD District Supervisor.

2. Testing Facility and Incoming Sample Protocol

a. An accredited laboratory shall be utilized for performing all tests for Dorsey Company. The polarized light microscopy (PLM) testing method will be used to check shingle samples. Upon request from the AQD District Supervisor, Dorsey Company will provide a copy of the laboratory certification and contact information.

b. Loads that are required to be tested will be quarantined from processing until lab results return. Test results must show ACM is <1% for loads to be processed.

c. A sample of shingle from each layer of roofing will be tested. Each sample size will be a 2”x 2” square. Samples will be labeled (sample number, date, location and layer), recorded in a sample log book, and sent to an accredited laboratory to test for asbestos content.

3. Management of ACM Loads

a. Any samples returning that are an ACM >1%, are a non-recyclable material and are not to be processed.

b. Any loads that are deemed non-recyclable materials will be removed from quarantined area and placed into disposal cans supplied by a licensed disposal company or municipal agency. These materials along with other waste generated at site will be disposed of in landfills.

4. End Product Sampling Protocol

a. One mandatory sample of recycled asphalt shingle (RAS) product will be collected for every 100 tons produced during the grinding process. Sample location will be just after final exit conveyor, captured before product contacts ground.

b. Samples will be split into equal parts, both labeled with date, time, sampling staff name and a sample report form. Sample size will depend on lab requirements for performing the standard PLM test.

c. The first sample will be sent to an accredited laboratory. for asbestos testing using the PLM method. The second sample will be retained by the operator.

d. Documentation of test results will be kept on file for review.