MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

AUGUST 3, 2007

PERMIT TO INSTALL
990-90B

ISSUED TO
MICHIGAN PAVING & MATERIALS COMPANY
WOODLAND PAVING DIVISION

LOCATED AT
3566 Millcreek Avenue NE
Comstock Park, Michigan

IN THE COUNTY OF
Kent

STATE REGISTRATION NUMBER
A2534

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: **October 9, 2006**	
DATE PERMIT TO INSTALL APPROVED: **August 3, 2007**	SIGNATURE: **G. Vinson Hellwig**
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

Section **Page**

Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	Btu	British thermal unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H_2S	Hydrogen sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	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	ng	Nanogram
MAP	Malfunction Abatement Plan	NO_x	Oxides of nitrogen
MDEQ	Michigan Department of Environmental Quality	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM-10	Particulate matter less than 10 microns aerodynamic diameter
MSDS	Material Safety Data Sheet	pph	Pounds 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
ROP	Renewable Operating Permit	THC	Total hydrocarbons
SC	Special Condition Number	tpy	Tons per year
SCR	Selective Catalytic Reduction	µg	Microgram
SRN	State Registration Number	VOC	Volatile organic compound
TAC	Toxic Air Contaminant	yr	Year
TEQ	Toxicity Equivalence Quotient		
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 Pemit 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
EUHMAPLANT	Hot mix asphalt (HMA) facility including: Aggregate conveyors 650 tons per hour parallel flow drum dryer/mixer Fabric filter dust collector	SVHMAPLANT
EUYARD	Fugitive dust sources including: Plant roadways Plant yard Material storage piles Material handling operations (excluding cold feed aggregate bins)	Fugitive Dust
EUACTANKS	Liquid asphalt cement storage tanks	N/A
EUSILOS	Hot Mix Asphalt (HMA) paving material product storage silo	N/A
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	Emission Units Included in Flexible Group	Stack Identification
FGFACILITY	All process equipment at the stationary source including equipment covered by other permits, grand-fathered equipment and exempt equipment.	N/A

The following conditions apply to: EUHMAPLANT

Emission Limits

	Pollutant	Limit [1]	Time Period	Testing/ Monitoring Method	Applicable Requirements
1.1a	PM	0.04 gr/dscf	Test Protocol[3]	SC 1.19, 1.21, 1.22	40 CFR 60, Subparts A & I
1.1b	PM	0.04 lb per ton[2]	Test Protocol[3]	SC 1.16, 1.22, 1.25, 1.28	R 336.1205(1)(a), R 336.1205(3)
1.1c	CO	0.201 lb per ton[2]	1 hour	SC 1.16, 1.18, 1.27, 1.28	R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702
1.1d	CO	78.75 tpy	12-month rolling time period as determined at the end of each calendar month	SC 1.25, 1.28	R 336.1205(1)(a), R 336.1205(3)
1.1e	SO_2	0.14 lb per ton[2]	1 hour	SC 1.23, 1.26, 1.28	R 336.1205(1)(a), R 336.1205(3)
1.1f	NO_x	0.12 lb per ton[2]	1 hour	SC 1.25, 1.28	R 336.1205(1)(a), R 336.1205(3)
1.1g	Lead	1.5×10^{-5} lb per ton[2]	Test Protocol[3]	SC 1.25, 1.28	R 336.1225
1.1h	Benzene	0.001 lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1i	Toluene	0.006 lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1j	Ethylbenzene	0.005 lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1k	Xylene	0.001 lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1l	Naphthalene	0.001 lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1m	Formaldehyde	0.01 lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1n	Acrolein	0.0008 lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1o	Arsenic	1.5×10^{-6} lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1p	Nickel	1.5×10^{-4} lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1q	H_2SO_4	0.015 lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1r	Manganese	5.0×10^{-5} lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.28	R 336.1224, R 336.1225
1.1s	Hydrogen Chloride	0.006 lb per ton[2]	Test Protocol[3]	SC 1.15, 1.18, 1.25, 1.26, 1.28	R 336.1224, R 336.1225

[1] Annual limits based on 750,000 tons HMA paving material production.
[2] Pound pollutant per ton of HMA paving material produced.
[3] Test Protocol shall specify averaging time.

Material Usage Limits

1.2 The permittee shall not burn any fuel other than natural gas, propane, distillate oil, residual oil, blended fuel oil, or recycled used oil in EUHMAPLANT. The sulfur content of all fuel oil burned in EUHMAPLANT shall not exceed 0.6 percent by weight. **[R 336.1224, R 336.1225, R 336.1702]**

1.3 The permittee shall not burn in EUHMAPLANT any hazardous waste (as defined in state or federal law), blended fuel oil or specification recycled used oil (RUO) containing any contaminant that exceeds the following concentrations or for which the flash point, ash content, or acidity vary from the standards specified in the following table. **[R 336.1201(3), R 336.1225]**

Contaminant	Limit	Units
Arsenic	5.0	ppmw
Cadmium	2.0	ppmw
Chromium	10.0	ppmw
Lead	100.0	ppmw
PCBs	1.0	ppmw
Total Halogens	1000.0	ppmw
Sulfur	0.6	Weight %
Minimum Flash Point	100.0	°F
Maximum Ash Content	1.0	Weight %
Acidity	Minimum pH = 4 Maximum pH = 10	N/A

1.4 The permittee shall not use any asbestos tailings or waste materials containing asbestos in EUHMAPLANT pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61 Subpart M. **[R 336.1225, R 336.1901, 40 CFR Part 61 Subparts A & M]**

1.5 The permittee shall limit the asphalt mixture process in EUHMAPLANT to a maximum of 50 percent RAP material based on a monthly average. **[R 336.1224, R 336.1225, R 336.1702]**

1.6 The permittee shall not process more than 750,000 tons of HMA paving materials in EUHMAPLANT per 12-month rolling time period as determined at the end of each calendar month. **[R 336.1205(1)(a), R 336.1205(3)]**

1.7 The permittee shall not process more than 650 tons of HMA paving materials in EUHMAPLANT per hour based on a daily average, which shall be determined at the end of each day by dividing the daily HMA production by the daily operating hours. **[R 336.1224, R 336.1225, R 336.1702**

Process/Operational Limits

1.8 The permittee shall not operate EUHMAPLANT unless at a minimum the program for fugitive emissions control for EUYARD specified in Appendix A, or an amended plan approved by the AQD District Supervisor, has been implemented and is maintained. **[R 336.1371, R 336.1372, Act 451 324.5524]**

1.9 The permittee shall not operate EUHMAPLANT unless at a minimum the preventative maintenance program attached as Appendix B, or an amended plan approved by the AQD District Supervisor, has been implemented and is maintained. **[R 336.1910, R 336.1911]**

1.10 The permittee shall not operate EUHMAPLANT unless the Compliance Monitoring Plan (CMP) for RUO specified in Appendix C, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. **[R 336.1201(3), R 336.1225, R 336.1371, R 336.1372, R 336.1910, R 336.1911, Act 451 324.5521, 40 CFR 60.50c(c)]**

1.11 The permittee shall not operate EUHMAPLANT unless at a minimum the plan that describes how emissions will be minimized during all startups, shutdowns and malfunctions attached as Appendix D, or an amended plan approved by the AQD District Supervisor, has been implemented and is maintained. **[R 336.1911, R 336.1912]**

1.12 The permittee shall maintain the efficiency of the EUHMAPLANT drum mix burners, to control CO emissions, by fine tuning the burners for proper burner operation and performance. The permittee shall fine tune the burners at the startup of the drum mix fuel burners; upon each paving season; after every 500 hours of operation thereafter or upon a malfunction of EUHMAPLANT as shown by the CO emission monitoring data, whichever occurs first. **[R 336.1205, R 336.1901]**

1.13 The permittee shall not operate EUHMAPLANT unless the fabric filter dust collector is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the fabric filter dust collector requires a pressure drop range between 2 and 10 inches of water column. The minimum pressure drop shall not be less than 2 inches, water gauge, except when a large number of filter bags have been replaced or other reason acceptable to the AQD. **[R 336.1910]**

Testing

1.14 Verification and quantification of odor emissions from EUHMAPLANT, by testing at owner's expense, in accordance with Department requirements, may be required for continued operation. Within 60 days upon notification from AQD District Supervisor, a complete stack sampling and odor threshold analysis plan using the Dynamic Dilution Method shall be submitted to the AQD. The stack sampling plan shall include provisions for various fuel usages, plant operating conditions, and odor neutralizer system operation (if any). The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results within one calendar year of permit issuance. **[R336.1901, R336.2001, R336.2003, R336.2004**

1.15 Verification and quantification of emission rates of the TACs listed below from EUHMAPLANT, by testing at owner's expense, in accordance with Department requirements, will be required for continued operation. Within 60 days after permit issuance, a complete test plan shall be submitted to the AQD and shall include an averaging time for each TAC and a provision for monitoring CO emissions. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results within one calendar year of permit issuance. TACs: acrolein, arsenic, benzene, ethylbenzene, formaldehyde, lead, manganese, naphthalene, nickel, sulfuric acid mist, toluene, xylene, and hydrogen chloride. **[R336.1225, R336.2001, R336.2003, R336.2004]**

1.16 Verification and quantification of emission rates of PM and CO from EUHMAPLANT, by testing at owner's expense, in accordance with Department requirements, will be required for continued operation. Within 60 days of permit issuance a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results within one calendar year of permit issuance. **[R336.1205(1)(a), R336.1205(3), R336.2001, R336.2003, R336.2004]**

Monitoring

1.17 The permittee shall monitor, in a satisfactory manner, the virgin aggregate feed rate and the RAP feed rate to EUHMAPLANT on a continuous basis. **[R 336.1224, R 336.1225, R 336.1702]**

1.18 The permittee shall monitor, with a handheld CO monitor, the CO emissions from EUHMAPLANT and the production data associated with the time the emissions data were collected. The permittee shall record one data set for each of the following occurrences:

a) Upon start-up of each paving season.

b) Upon a malfunction of the drum dryer or its associated burner.

c) After every 500 hours of operation.

A data set shall consist of at least eight separate CO readings and shall be taken over a total time period of 30 minutes or longer. The permittee shall submit any request for an alternate monitoring schedule, in writing, to the AQD District Supervisor for review and approval. The permittee shall use data collected by this method for determining proper burner operation. **[R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702, R 336.1901]**

1.19 The permittee shall monitor emissions and operating information for EUHMAPLANT in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and I. **[40 CFR Part 60 Subparts A & I]**

1.20 Applicant shall install and operate in a satisfactory manner instrumentation to monitor and record the drum mix temperature and drum exhaust gas temperature on a continuous basis. Temperature data recording shall consist of measurements made at equally spaced intervals not to exceed 15 minutes per interval. All such records shall be kept on file until the end of the calendar year in which they were recorded and made available to the Air Quality Division upon request. **[R 336.1901]**

Recordkeeping/Reporting/Notification

The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available 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 336.1201]**

1.21 The permittee shall keep records of emissions and operating information to comply with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and I for EUHMAPLANT. The permittee shall keep all source emissions data and operating information on file for a period of at least five years and make them available to the Department upon request. **[40 CFR Part 60 Subparts A & I]**

1.22 The permittee shall conduct all necessary maintenance and make all necessary attempts to keep drum mixer/burner and fabric filter dust collector components of EUHMAPLANT maintained and operating in a satisfactory manner at all times. The owner or operator shall maintain a log of all significant maintenance activities conducted and all significant repairs made to EUHMAPLANT. Maintenance records for the fabric filter dust collector shall be consistent with the preventative maintenance program attached as Appendix B. 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 336.1910, R 336.1911]**

1.23 The permittee shall keep the following records for each calendar day that EUHMAPLANT is operated:

a) Identification, type and the amounts (in gallons) of all fuel oils combusted.

b) Sulfur content (percent by weight), specific gravity, flash point, and higher heating value (Btu/lb) of all fuel oils being combusted.

c) Tons of hot mix asphalt containing RAP produced, including the average percent of RAP per ton of hot mix asphalt produced containing RAP.

The permittee shall keep all records on file for at least five years and make them available to the Department upon request. **[R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1402, R 336.1702, R 336.1901]**

1.24 The permittee shall keep intermittent daily records of the following production information for EUHMAPLANT:

a) The virgin aggregate feed rate.

b) The RAP feed rate.

c) The asphalt paving material product temperature.

d) Information sufficient to identify all components of the asphalt paving material mixture.

Upon start-up, the permittee shall record the initial mix design and the time. When a new mix design is activated after start-up, the permittee shall record the time and new mix design. The permittee shall keep all records on file until the end of the paving season in which they were recorded and make them available to the Department upon request. **[R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702, R 336.1901]**

1.25 The permittee shall keep in a satisfactory manner, monthly and 12-month rolling time period emission calculation records of all criteria pollutants and TACs listed in the Emission Limit Table for EUHMAPLANT. If stack test results for EUHMAPLANT exist for any of the pollutants, the permittee may use those stack test results to estimate pollutant emissions subject to the approval of the AQD. In the event that stack test results do not exist for a specific pollutant, the permittee shall use the applicable emission factor listed in the Emission Limit Table to estimate the emissions of a pollutant from EUHMAPLANT. 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)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702]**

1.26 The permittee shall keep in a satisfactory manner, daily emission calculation records of hydrogen chloride and sulfur dioxide for EUHMAPLANT. In the calculations the following control efficiencies may be applied to the theoretical emissions: 61% control for hydrogen chloride; 43% control for sulfur dioxide when RAP is included in the mix; and 72% control for sulfur dioxide when only virgin aggregate is used in the mix. 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)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702]**

1.27 The permittee shall keep records, as described in Special Condition 1.18, of all CO emissions and related production data including the dates and times emissions were monitored. The permittee shall use this data to calculate the pounds of CO emitted per ton of HMA paving materials produced. 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)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702]**

1.28 The permittee shall keep, in a satisfactory manner, average daily, monthly and 12-month rolling time period records of the amount of HMA paving materials produced from EUHMAPLANT. 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)(a), R 336.1205(3)]**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Diameter (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirements
1.29	SVHMAPLANT	71	175	R 336.1225
	The exhaust gases shall be discharged unobstructed vertically upwards to the ambient air.			

The following conditions apply to: EUYARD

Process/Operational Limits

2.1 The permittee shall not operate EUYARD unless the program for fugitive emissions control specified in Appendix A has been implemented and is maintained. **[R 336.1371, R 336.1372, Act 451 324.5524]**

Recordkeeping/Reporting/Notification

2.2 The permittee shall calculate in a satisfactory manner, the annual fugitive dust emissions of particulate matter. The fugitive dust emissions shall be calculated using the current U. S. EPA Compilation of Air Pollutant Emission Factors (AP-42) or other emission factors approved by the Department such as those used in the MAERS. The permittee shall report the actual emission levels for EUYARD to the AQD through the annual emission reporting required under Section 5503(k) of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. **[R 336.1371, R 336.1372, R 336.1901]**

The following conditions apply to: EUACTANKS

Process/Operational Limits

3.1 The permittee shall not operate EUACTANKS unless the vapor condensation and recovery system is installed, maintained, and operated in a satisfactory manner. **[R 336.1224]**

The following conditions apply to: EUSILOS

Process/Operational Limits

4.1 The permittee shall not operate EUSILOS unless the emission capture system for the top of each storage silo is installed, maintained, and operated in a satisfactory manner. **[R 336.1224]**

The following conditions apply to: FGFACILITY

Emission Limits

	Pollutant	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirements
5.1a	Each Individual HAP	Less than 8.9 tpy	12-month rolling time period as determined at the end of each calendar month	SC 5.2	R 336.1205(1)(a), R 336.1205(3)
5.1b	Aggregate HAPs	Less than 22.4 tpy	12-month rolling time period as determined at the end of each calendar month	SC 5.2	R 336.1205(1)(a), R 336.1205(3)

Recordkeeping/Reporting/Notification

The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available 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 336.1201]**

5.2 The permittee shall calculate the actual emissions of HAPs from FGFACILITY based on the most recent calendar year. If stack test results for FGFACILITY exist for any of the aforementioned pollutants, the permittee may use those stack test results to estimate pollutant emissions subject to the approval of the AQD. In the event that stack test results do not exist for a specific pollutant, the permittee shall use the applicable emission factor listed in the Emission Limit Table to estimate the emissions of a pollutant from FGFACILITY. 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)(a), R 336.1205(3)]**

Appendix A
FUGITIVE DUST CONTROL PLAN

PURPOSE: This plan provides dust control strategies for the areas adjacent to and associated with the equipment operations involved in the manufacture of Hot Mix Asphalt (HMA) paving materials.

1. SITE MAINTENANCE.

a. Dust on all areas where vehicular traffic will travel shall be controlled by the application of water, sweeping, vacuuming, or other acceptable dust control method. This will occur a minimum of two times per month or more frequently as dictated by weather conditions and vehicular activity. The dust control method shall be acceptable as determined by the District Supervisor.

b. The speed of vehicles on the site will be limited to 10 miles per hour or less. Signs will be posted to advise drivers of the speed limitation.

c. Stock piling will be performed in a manner that minimizes freefall drop distance.

d. Piles will be maintained to prevent fugitive dust. This includes the use of watering, covering and encrusting agents.

2. MANAGEMENT OF ON-SITE ROADWAYS.

a. All the roadways on which the HMA haul vehicles will travel are paved with HMA. This includes the roadway on which the vehicles travel around the process equipment to be loaded with HMA paving materials.

b. During the operating season the paved plant roads shall be treated with water, vacuumed, or swept in a manner that minimizes the introduction of the dust to the ambient air to control fugitive dust emissions and track-out dust. This will occur a minimum of two times per month or more frequently as dictated by weather conditions and vehicular activity. The dust control method shall be acceptable as determined by the District Supervisor.

c. During the operating season, the unpaved travel surfaces shall be treated with water, or other acceptable dust control agents on a frequency sufficient to meet the visible emission opacity standard of five (5) percent opacity specified in Section 5524 of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

d. Any aggregate spillage on roads shall be removed immediately.

3. ON-SITE MANAGEMENT OF HAUL VEHICLES.

a. INCOMING TRUCKS: All trucks entering the site to deliver aggregates will be required to have the loads covered. A sign shall be posted to advise drivers of this requirement.

b. OUT-GOING TRUCKS: All trucks leaving the site with HMA paving materials will be required to cover their loads prior to leaving the site. A sign shall be posted to advise drivers of this requirement.

4. MANAGEMENT OF FRONT-END LOADER OPERATIONS.

The front-end loader operator shall be directed to avoid overfilling the bucket of the loader and the feed hoppers to prevent spillage, and to minimize the drop height of the material when loading the feed hoppers or transferring material to stockpiles.

Appendix A - Continued

5. RECORDKEEPING.

Records of dust control activities on travel surfaces and other surfaces where fugitive dust emissions occur shall be kept on file and made available to MDEQ staff upon request until the end of the paving season. The records will indicate the date, time, what was observed or the reason for the dust control activity (routine or other), and what action was taken.

6. FUGITIVE EMISSIONS FROM PROCESS EQUIPMENT AND FABRIC FILTER DUST COLLECTOR.

Any fugitive emissions from leak(s) and malfunction(s) from any transfer system, storage bin, mixer, hopper, or fabric filter dust collector shall be immediately corrected to prevent further fugitive emissions.

Appendix B
PREVENTATIVE MAINTENANCE PROGRAM FOR THE FABRIC FILTER DUST COLLECTOR

The Preventative Maintenance Program for the Fabric Filter Dust Collector is for the purpose of keeping the dust collector in good operating condition, and thereby, maintaining the rated capture efficiency of the dust collector for the control of particulate matter. ALL REFERENCES TO VISIBLE EMISSIONS IN Appendix B, PARTICULARLY IN SEC. 5, REFER SPECIFICALLY TO VISIBLE EMISSIONS CAUSED BY A DUST (PARTICULATE) EMISSION.

1. FABRIC FILTER DUST COLLECTOR OPERATING PRESSURE DROP.

a. The pressure drop across the fabric filter dust collector shall be continuously measured and the minimum pressure drop shall not be less than 2 inches, water gauge, except when a large number of filter bags have been replaced or other reason acceptable to the AQD.

b. The pressure drop across the fabric filter dust collector shall be recorded at least once per day while the process is at its normal operating capacity.

2. FABRIC FILTER DUST COLLECTOR /PLANT ALARM SYSTEM.

The fabric filter dust collector shall be equipped with a high temperature sensor and alarm system. The alarm system shall be designed to set off an alarm when the high temperature set-point has been violated, and, to begin a sequential shut-down of the plant if the situation is not resolved within a very short period of time after the alarm sounds.

3. HANDLING AND STORAGE OF FABRIC FILTER DUST.

Accumulated fabric filter dust (particulate) shall be stored and/or be disposed of in a manner which minimizes the introduction of the air contaminants to the outer air.

4. PIPING AND SEALS MAINTENANCE.

Piping and seals shall be replaced as needed.

5. VISIBLE EMISSIONS AND ACTIONS TO BE TAKEN IN THE EVENT OF AN EXCEEDANCE.

In the event visible emissions, which appear to exceed the standard allowed in General Condition No. 11 of this Permit to Install, are observed at the discharge point of the stack, the following actions shall be taken:

If no certified visible emissions reader can be on-site within 60 minutes of observing the visible emissions to verify the emission density, operations shall be ceased immediately and the cause of the visible emissions determined and corrected prior to operating the plant again.

REMINDER: If the visible emissions continue for more than 2 hours, in excess of an emission standard, an excess emissions report must be made to MDEQ.

Appendix B - Continued

6. BLACK LIGHT INSPECTIONS.

A black light test shall be conducted at least once per year – within two weeks after operations begin for a paving season. Black light inspection equipment and materials shall be available for use at the facility and used as needed during the paving season.

7. INVENTORY OF FILTER BAGS.

An inventory of fabric filter bags shall be maintained by the facility owner or operator so that filter bags will be available to this site within four hours of requesting the filter bags. In addition, a minimum of 15 filter bags shall be kept on-site at all times. An inventory of other replacement parts for the fabric filter dust collector shall be maintained at all times.

8. FABRIC FILTER DUST COLLECTOR INSPECTION RECORD.

A written or electronic record of the following shall be maintained by the owner or operator of the facility:

- Visual inspections of the interior components of the fabric filter dust collector, including date, time, and findings;
- Black light inspections, including date, time, and findings;
- Number of filter bags installed as a result of each inspection to replace filter bags already in use in the fabric filter dust collector, including date, time, location, and whether the replacement filter bag was brand new or a cleaned, previously used filter bag;
- An explanation (i.e., a description of the damage found) for each filter bag removed from the fabric filter dust collector and confirmation that another filter bag was installed to replace it;
- Each observation of visible emissions at the stack discharge point and description of response to the observed visible emission, including date and time of visible emission occurrence and results of EPA Method 9 observation, if any. Any such visible emission shall be recorded and made available upon request to the AQD.
- All significant maintenance activities performed on the fabric filter dust collector.

Appendix C
COMPLIANCE MONITORING PLAN (CMP)
FOR FACILITIES BURNING RECYCLED USED OIL (RUO)

A. All RUO monitored using this CMP must be acceptable for use as a fuel under federal and state used oil regulations. A certificate of analysis must accompany each delivery and be kept on file.

Each shipment from the used oil supplier must be accompanied by supplier's documentation demonstrating that the used oil meets specification levels shown in 40 CFR 279.11 and the State of Michigan Department of Environmental Quality Hazardous Waste Management Administrative Rules, Part 111, R 299.9809. The documentation will include supplier certification and analytical data. The analysis will be for the batch of used oil accepted for use as a fuel by the permittee. Separate truckloads may have identical supplier's documentation when they are loaded from a unique batch from a single supplier. A batch is a quantity of used oil, contained in one storage unit (i.e., a tank, tanker truck, barge, etc.) where no additional oil is put into the storage unit after testing. If additional oil is added to a storage unit after testing, a new batch has been created.

The supplier's certificate of analysis shall be reviewed by the permittee to assure that the RUO properties and constituents do not exceed any of the used oil specifications contained in Table 1 of Appendix C prior to acceptance and off-loading of the shipment.

ALLOWABLE LEVELS

Allowable levels for RUO properties and constituents are listed in Table 1.

Table 1

PROPERTY/CONSTITUENT	ALLOWABLE LEVEL
Higher Heating Value	17,000 Btu per pound, minimum
Arsenic	5.0 ppm, maximum
Cadmium	2.0 ppm, maximum
Chromium	10.0 ppm, maximum
Lead	100.0 ppm, maximum
Sulfur	0.6 percent, maximum
Polychlorinated Biphenyls (PCBs)	1.0 ppm, maximum
Total Halogens	1,000 ppm, maximum

Verification: Shipping records for each load received will be maintained a minimum of 5 years.

B. All RUO deliveries shall be screened for halogens.

Upon receipt of each RUO fuel shipment and prior to off-loading the RUO fuel, the permittee shall obtain a representative sample according to methods described in EPA publication SW-846 "Test Methods for Evaluation Solid Waste, Physical/Chemical Methods" and screen the sample for Total Halogens by SW-846 Method 9077.

Verification: Records of the Total Halogens test results will be maintained a minimum of 5 years.

C. Required Laboratory Analysis

A split sample of the RUO shall be submitted by the facility to an independent laboratory to verify the information provided on the supplier's certificate of analysis for the batch. The laboratory analysis shall include the properties and constituents listed in Table 1 of this CMP. A second split sample shall be maintained by the facility until the end of the calendar year and shall be made available to the AQD upon request.

Laboratory: Any independent laboratory used by the facility for RUO analysis shall develop a Quality Assurance Plan (QAP). A copy of the QAP shall be submitted by the facility to the AQD, District Office 30 days prior to the use of that laboratory. Detailed in the QAP shall be the QA/QC procedures, sample handling, storage, chain of custody procedures, analytical methods for all analyses, a description of the laboratory instrumentation, and the instrumental detection limits. The analytical methods used by the independent laboratory should be consistent with the methods identified in the RUO Supplier's Analysis Plan pursuant to 40 CFR 279.55. A list of acceptable QA/QC requirements may be obtained from AQD, Technical Programs Unit in Lansing. The facility shall maintain a copy of the approved QAP on site or at its corporate offices.

D. Laboratory Analysis Frequency

The laboratory analysis required in this CMP shall be completed per Method 1 and/or Method 2 as applicable.

Method 1 - Pre-Qualification: For a dedicated tank of RUO, one split sample analysis is required.

Batch Documentation: For a single batch of RUO, the laboratory analysis will be required once prior to any shipments from that batch being received at the facility. For Method 1 pre-qualification a batch is a quantity of RUO contained in the suppliers storage unit where no additional oil is put into the storage unit after a representative sample has been collected for analysis. If additional oil is added to the storage unit, both a new supplier certificate of analysis and laboratory analysis are necessary.

Upon receipt of a shipment of RUO, the shipping paper shall be reviewed to determine if the RUO originated from a pre-qualified batch. All RUO shipments which are not from a pre-qualified batch are subject to the quarterly sample analysis required pursuant to verification Method 2.

Verification: A list of RUO batches that have been pre-qualified along with a record of both the RUO supplier's and the permittee's analytical data for the same batch will be maintained a minimum of 5 years.

Method 2 - On-Site Qualification: A quarterly split sample analysis is required for all shipments which are not from a pre-qualified batch.

When RUO that is not pre-qualified by Method 1 is accepted by the permittee, a minimum of one sample per calendar quarter shall be submitted for the required laboratory analysis. The quarterly sample(s) shall be selected from all RUO batches that are not pre-qualified by Method 1 and are accepted by the permittee. Unless an alternative plan is approved by the AQD district supervisor, the time interval between collection of samples shall be a minimum of 45 days.

Verification: A list of all RUO batches accepted and those that have been selected for quarterly sampling along with a record of both the RUO supplier's and the permittee's analytical data for the same batch will be maintained a minimum of 5 years.

Appendix D
EMISSION ABATEMENT PLAN FOR STARTUP, SHUTDOWN AND MALFUNCTIONS

This emission abatement plan is for the Michigan Paving and Materials hot mix asphalt plant located at 3566 Millcreek Avenue NW, Comstock Park, Michigan.

The plant is rated at 650 tons per hour of HMA. This is a parallel flow plant. The drum mixer is inclined with the burner and aggregates feed chute located at the top end. RAP materials are added in the middle portion of the drum. Liquid asphalt cement is added in the lower third of the drum for mixing with the aggregate and RAP materials. The plant is capable of running a monthly average of 50% RAP.

1. Normal Startup Procedure

The operator shall begin firing EUHMAPLANT from a cold start on natural gas only. This is especially important during cold weather startups. A record of the time when startup with natural gas ended and operation using other fuels began, as well as the time of introduction of raw materials into the dryer, shall be kept on file, for each day of operation of the facility, until the end of the calendar year in which they were recorded, or until a request by the permittee to end such record keeping is consented to in writing by the AQD District Supervisor. Records shall be made available to the Department upon request.

The plant computer controls plant startup. At startup the plant operator will enter into the plant operations computer the mix design, the tons per hour and how many tons he wants to make.
Once the operator starts the equipment the computer will start the cold feed bins and set the feed rate at the tons per hour that the operator has requested. The feed rate will be different for each mix design and tons per hour asked for.
When the plant computer senses that aggregate is crossing over the belt scale a timer that has been previously calibrated for the particular mix starts to count down. When the timer reaches zero the asphalt is started and feed to the mixer. The two products (aggregate, asphalt cement) meeting together at the correct time will eliminate most dust that would escape from the mixing drum.
Material that is discharged at startup is removed by way of the drag slat and discharge gate. This material is dropped into a loader bucket, dump truck or a holding area. The material is then moved to the recycle pile.
The drop height from the discharge gate is kept to the very minimum to keep any escaping dust from blowing.

2. Normal Shutdown Procedure

When the plant gets close to the total tons that the operator has asked for an alarm will sound. The operator has a short time to either switch mixes, increase the tons asked for or make a hot stop. If the operator does nothing the plant computer will start a normal shut down. When shutting down the mixing operation the plant computer stops the cold feed bins first. Material that is in process is allowed to proceed down the weigh belt. When the weigh belt senses that all material has cleared the belt a timer starts counting down to shut off the asphalt cement. This timer allows all of the aggregate to clear the drying drum and enter the mixer. The asphalt cement is timed for each mix designs so that the last of the aggregate and the asphalt cement meet at the mixing drum together.
Any mix that is wasted is discharged into the loader bucket, dump truck or into a holding area under the drag slat discharge gate and taken to the RAP pile for later crushing

3. Hot Starts-Hot Stops

If the silos become too full, the plant operator may have to make a hot stop, (drier and mixer full of material). When this happens, there is no material discharged. The plant can remain in this mode for up to two hours. After a hot stop, the plant would make a hot start. The exhaust fan and burner would be started and once they were running the rest of the plant would be started. There is some waste discharged at this time. The waste that is discharged is coated with asphalt but is too cold to be sold to a customer. This cold material is discharged through the drag slat discharge gate and placed in the RAP pile for later reuse.

4. Malfunction Stops

If a malfunction (computer or mechanical) does occur during drying/mixing operations a hot stop would be initiated until the problem is corrected. If for some reason the problem could not be corrected and the drier/mixer had to be emptied the asphalt cement could be controlled manually. This would be done only after all attempts at correcting the problem were exhausted.

If for some reason the asphalt pump should fail and not be repaired the drum would be emptied of mixed material until the discharged aggregate gets dusty. The drum would then be stopped and the asphalt pump repaired.
In addition there is a water supply at each location that can be used to knock down any blowing dust.

A. Identification of Supervisory and Maintenance Personnel

An updated list of current supervisory and maintenance personnel shall be kept at the plant. Descriptions of the responsibilities of these individuals for operation of the plant for startups, shutdowns, or malfunctions as well as inspections and repairs shall be stated on the updated list.

B. Description of Inspected Items

A daily walk around inspection will be done each morning while the plant is warming up. After startup, observations will be made of the baghouse stack for opacity and at a minimum the chutes, screw augers, and housings for any leaks. These observations should be carried out continuously during operations by the plant operator and by the loader operator as he feeds the plant.

At a minimum the following items are to be inspected-observed:

Roadways (fugitive dust)
Cold feed bins (falling aggregate)
Aggregate feed belts (falling aggregate)
Drier (seals for dust escaping)
Bucket elevator (seals for dust escaping)
Aggregate chutes (seals for dust escaping)
Screen (door seals for dust escaping)
Weigh hopper (seals for dust escaping)
Mixer (seals for dust escaping)
Baghouse (stack opacity)
Baghouse screws (shaft and door seals for dust escaping)

C. Frequency of Inspections

As stated above, a daily walk around inspection will be done each morning. This daily inspection will be followed with observations done by the plant operator and loader operator during the operations throughout the day. A minimum list of items that are to be inspected-observed is contained in **Paragraph B.**
A more thorough inspection will be done during the winter shutdown (normally from December 1 to April 1) for maintenance and repairs.

At a minimum the following items will be inspected (and repairs done if needed):

Cold feed bins (seals and belts rollers)
Belt lines (belts and rollers)
Dryer (shell, seals, flights)
Bucket elevator (chain, buckets, bearings, seals)
Chutes (liners, seals)
Screen (door seals, fugitive ductwork)
Weigh hopper (seals, calibration)
Mixer (seals, wear plate)

The baghouse will get a thorough inspection from the front inlet to the rear exhaust fan. This inspection will be done every spring before the paving season starts. (There are additional visual inspections done before and during the paving season as required by PTI No. 990-90B Appendix B).

Items to be inspected are:
Ductwork (inspected for thickness, will it last for the season)
Blow pipes, Diaphragm valves (are they working, good connections)
Bags and cages (condition of bags, age, number replaced during last season)
Dust screws - shaft seals and screw cover doors

D. Replacement Parts

As required by Air permit 990-90B, Appendix B, Sec 7, A minimum of fifteen (15) bags are kept in stock at all times. If bag stock gets close to the 15-bag minimum, additional bags will be ordered.
A minimum of five pounds of black light powder will be kept in stock at all times. This is the recommended quantity for the number of square feet of baghouse cloth.
A minimum of two (2) tubes of silicone caulk will be kept in stock for minor leaks around doors and seals.

E. Baghouse Variables and Monitoring

The baghouse is monitored continuously (PTI 990-90B, Appendix B, Sec.1a) by the use of a magnehelic gage. The pressure differential between the dirty and clean side of the baghouse shall be maintained above 2 inches. If the pressure should rise above 6 inches water gauge signaling an inoperative diaphragm valve the plant shall be stopped and the defective valve repaired or replaced. If the differential pressure should drop below 2 inches water gauge company shall begin looking for a torn bag or a problem with the tubesheet between the dirty and clean side of the baghouse, this would also show up as a dirty stack. The only time the baghouse would normally drop below 2 inches water gauge is if a large number of filter bags were replaced.
If a large number of bags were replaced (over 100) the pressure on the magnehelic would drop slightly. This drop would only last for a day or less depending on the production.
Monitoring of the baghouse is done by observation, magnehelic or by the high temperature alarm that is set to go off at 375/400 degrees stack temperature.

F. Corrective procedures and responsible persons

As long as the attached Startup-shutdown plan is followed there should be no problem meeting the compliance limits. If for some reason these limits were exceeded it would be the responsibility of the plant supervisor or in his absence the plant operator to stop the plant and correct the problem immediately.

Rule 336.1912 shall be followed when abnormal conditions exist.

G. Drum Mix and Batch Normal Startup Procedures

During startup, operation and shutdown the following items will be monitored continuously:

Stack Temperature - As material starts through the plant the temperature has to be brought slowly by manually adjusting the burner. As the operator opens the burner he also opens the exhaust fan damper to maintain his quarter to one half inch of suction on the burner end of the drum.

Mix Temperature - As material starts flowing through the plant it is critical to watch mix discharge temperature in addition to the stack temperature. Too high of a discharge temperature, will cause blue smoke. Too low of a temperature, will not produce an acceptable product.

Exhaust Magnehelic - As material is fed into the drum and the burner is opened up the differential pressure in the baghouse will increase. As the plant reaches normal operating parameters the pressure differential will settle between 2 and 6 inches water gauge. The differential pressure can be adjusted by opening or closing the exhaust damper. The operator will want to keep between a quarter and one half-inch draw on the burner end for best burner efficiency.

Along with monitoring the above items the operator needs to know what the weather has done to change the moisture levels in the aggregate and RAP. The moisture can determine the appropriate burner setting to reach the desired mix discharge temperature.