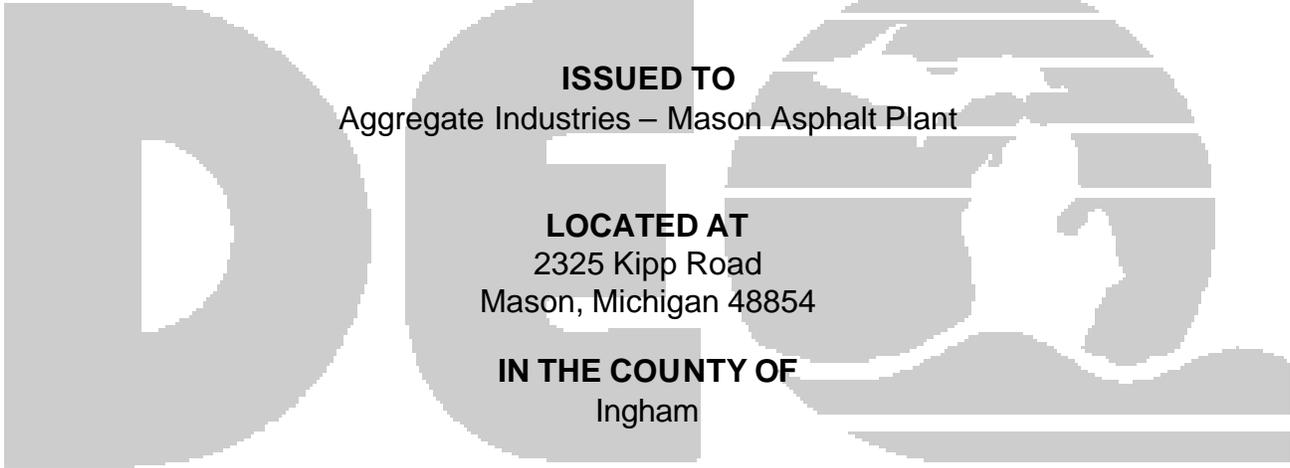


**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

August 6, 2004

**NEW SOURCE REVIEW PERMIT TO INSTALL
No. 1343-91C**



ISSUED TO

Aggregate Industries – Mason Asphalt Plant

LOCATED AT

2325 Kipp Road
Mason, Michigan 48854

IN THE COUNTY OF

Ingham

STATE REGISTRATION NUMBER

B5817

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 Part 5505(1) of Article II, Chapter I, Part 55 (Air Pollution Control) of P.A. 451 of 1994. 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: 07/22/2004	
DATE PERMIT TO INSTALL APPROVED: 08/06/2004	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

Section	Page
Alphabetical Listing of Common Abbreviations / Acronyms	2
General Conditions	3
Emission Unit Identification.....	5
Flexible Group Identification	5
Emission Unit and Flexible Group Special Conditions	5
EUHMAPLANT	5
EUYARD	10
EUACTANKS.....	10
FGFACILITY	11
Appendices.....	12
Appendix A: Fugitive Dust Control Plan.....	12
Appendix B: Preventative Maintenance Program for the Fabric Filter Dust Collector	14
Appendix C: Compliance Monitoring Plan for the Characterization of Recycled Used Oil.....	16

Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	Btu	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
EPA	Environmental Protection Agency	gr	Grains
EU	Emission Unit	Hg	Mercury
FG	Flexible Group	hr	Hour
GACS	Gallon of Applied Coating Solids	H ₂ S	Hydrogen Sulfide
GC	General Condition	hp	Horsepower
HAP	Hazardous Air Pollutant	lb	Pound
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	Malfuction Abatement Plan	PM	Particulate Matter
MDEQ	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns 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	Reasonable 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. **[R336.1201(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. **[R336.1201(4)]**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **[R336.1201(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. **[R336.1201(8), Section 5510 of Act 451, PA 1994]**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **[R336.1219]**
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. **[R336.1901]**
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). **[R336.1912]**
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.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.
11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R336.1303. **[R336.1301]**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this permit to install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R336.1370(2). **[R336.1370]**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R336.2001 and R336.2003, under any of the conditions listed in R336.2001. **[R336.2001]**

SPECIAL CONDITIONS

Emission Unit Identification

Emission Unit ID	Emission Unit Description	Stack Identification
EUHMAPLANT	Hot mix asphalt (HMA) facility including: Aggregate conveyors, Astec 8 foot stationary double barrel 350 tons per hour drum mix asphalt plant firing natural gas, propane, No. 2 oil, or specification recycled used oil, 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 R336.1201, except as allowed by R336.1278 to R336.1290.		

Flexible Group Identification

Flexible Group	Emission Units Included in Flexible Group	Stack Identification
FGFACILITY	EUHMAPLANT, EUYARD, EUACTANKS and EUSILOS	N/A

The following conditions apply to: EUHMAPLANT

Emission Limits

	Pollutant	Limit¹	Time Period	Testing/ Monitoring Method	Applicable Requirements
1.1a	PM	0.04 gr/dscf	Test Protocol ³	SC 1.12, SC 1.16, SC 1.17, SC 1.19, SC 1.20	40 CFR Part 60, Subparts A & I
1.1b	PM	0.04 lb per ton ²	Test Protocol ³	GC 14, SC 1.20, SC 1.25	R336.1205(1)(a), R336.1205(3)
1.1c	CO	0.201 lb per ton ²	1 hour	SC 1.13, SC 1.15, SC 1.24, SC 1.25	R336.1205(1)(a), R336.1205(3), R336.1224, R336.1225, R336.1702
1.1d	CO	85.4 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 1.23, SC 1.25	R336.1205(1)(a), R336.1205(3)
1.1e	SO ₂	0.1656 lb per ton ²	1 hour	SC 1.3, SC 1.13, SC 1.21, SC 1.25, SC 1.26	R336.1205(1)(a), R336.1205(3)

	Pollutant	Limit¹	Time Period	Testing/ Monitoring Method	Applicable Requirements
1.1f	SO ₂	70.4 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 1.3, SC 1.18, SC 1.23, SC 1.25, SC 1.26	40 CFR 52.21(c)&(d)
1.1g	Lead	2.0x10 ⁻⁶ lb per ton ²	Test Protocol ³	GC 13, SC 1.3	R336.1901
1.1h	Benzene	0.001 lb per ton ²	Test Protocol ³	GC 13, SC 1.15, SC 1.24	R336.1225
1.1i	Toluene	0.006 lb per ton ²	Test Protocol ³	GC 13, SC 1.15, SC 1.24	R336.1225
1.1j	Ethylbenzene	0.001 lb per ton ²	Test Protocol ³	GC 13, SC 1.15, SC 1.24	R336.1225
1.1k	Xylene	0.001 lb per ton ²	Test Protocol ³	GC 13, SC 1.15, SC 1.24	R336.1225
1.1l	Naphthalene	0.001 lb per ton ²	Test Protocol ³	GC 13, SC 1.15, SC 1.24	R336.1225
1.1m	Formaldehyde	0.01 lb per ton ²	Test Protocol ³	GC 13, SC 1.15, SC 1.24	R336.1225
1.1n	Acrolein	0.00021 lb per ton ²	Test Protocol ³	GC 13, SC 1.15, SC 1.23, SC 1.24	R336.1225
1.1o	Arsenic	1.0x10 ⁻⁶ lb per ton ²	Test Protocol ³	GC 13, SC 1.3	R336.1224, R336.1225
1.1p	Nickel	1.0x10 ⁻⁴ lb per ton ²	Test Protocol ³	GC 13	R336.1224, R336.1225
1.1q	H ₂ SO ₄	0.0032 lb per ton ²	Test Protocol ³	GC 13	R336.1224, R336.1225
1.1r	Manganese	5.0x10 ⁻⁵ lb per ton ²	Test Protocol ³	GC 13	R336.1224, R336.1225

¹ Limits based on 850,000 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, virgin No. 2 fuel oil, or specification recycled used oil in EUHMAPLANT. [R336.1224, R336.1225, R336.1702]

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. [R336.1201(3), R336.1224, R336.1225, R336.1901]

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	1,000.0	ppmw
Sulfur	1.0	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 asbestos-containing waste materials in EUHMAPLANT pursuant to the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 61 Subpart M. **[R336.1225, R336.1901, 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. **[R336.1224, R336.1225, R336.1702]**
- 1.6 The permittee shall not process more than 850,000 tons of HMA paving materials in EUHMAPLANT per 12-month rolling time period as determined at the end of each calendar month. **[R336.1205(1)(a), R336.1205(3), R336.1225, R336.1227(2)]**
- 1.7 The permittee shall not process more than 350 tons of HMA paving materials in EUHMAPLANT per hour based on a daily average, which shall be determined by dividing the daily HMA production by the daily operating hours. **[R336.1224, R336.1225, R336.1702]**

Process/Operational Limits

- 1.8 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. **[R336.1201(3), R336.1225, R336.1371, R336.1372, R336.1910, R336.1911, Act 451 324.5521, 40 CFR 60.50(c)]**
- 1.9 The permittee shall not operate EUHMAPLANT unless the program for fugitive emissions control for EUYARD specified in Appendix A has been implemented and is maintained. **[R336.1371, R336.1372, Act 451 324.5524]**
- 1.10 The permittee shall maintain the efficiency of the EUHMAPLANT drum mix burners, by fine tuning the burners for proper burner operation and performance, to control CO emissions. This shall be done 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. **[R336.1205, R336.1901]**
- 1.11 The permittee shall not operate EUHMAPLANT unless an acceptable plan that describes how emissions will be minimized during all startups, shutdowns and malfunctions has been submitted to the AQD District Supervisor. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. **[R336.1911, R336.1912]**

Equipment

- 1.12 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 3 and 7 inches of water column. **[R336.1910]**

Testing

- 1.13 Verification and quantification of emission rates of SO₂ from EUHMAPLANT, by testing at owner's expense, in accordance with Department requirements, will be required for continued operation when RUO is used as a fuel. The permittee shall notify the AQD in writing within seven days after RUO is first used as a fuel in EUHMAPLANT. Testing shall be completed within 180 days after the first day RUO is fired in EUHMAPLANT. No less than 30 days before beginning testing, 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 60 days of the last date of testing. **[R336.2001, R336.2003, R336.2004, 40 CFR 52.21(c)&(d)]**

Monitoring

- 1.14 The permittee shall monitor, in a satisfactory manner, the virgin aggregate feed rate and the RAP feed rate to EUHMAPLANT on a continuous basis. **[R336.1224, R336.1225, R336.1702]**
- 1.15 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. One data set shall be recorded for each of the following occurrences:
- a) Upon start-up of each paving season.
 - b) Upon a malfunction.
 - 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 thirty minutes or longer. Any request for an alternate monitoring schedule shall be submitted in writing to the AQD District Supervisor for review and approval. Data collected by this method shall be used for determining proper burner operation. However, data collected by this method shall not supersede the results of a performance test meeting Department requirements. **[R336.1205(1)(a), R336.1205(3), R336.1224, R336.1225, R336.1702, R336.1901]**

- 1.16 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]**
- 1.17 The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor, by observation, the pressure drop across the fabric filter dust collector in EUHMAPLANT once per day. The device shall be certified by the manufacturer to be accurate within ± 2 inches water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions. **[R336.1331, R336.1901]**
- 1.18 The permittee shall monitor, in a satisfactory manner, the fuel usage rate for EUHMAPLANT on a daily basis in gallons per day. **[R336.1205(1)(a), R336.1205(3), R336.1225, R336.1402]**

Recordkeeping/Reporting/Notification

1.19 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. All source emissions data and operating information shall be kept on file for a period of at least five years and made available to the Department upon request. **[40 CFR Part 60 Subparts A & I]**

1.20 The permittee shall conduct all necessary maintenance and make all necessary attempts to keep all 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. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1910, R336.1911]**

1.21 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.
- d) Determination of SO₂ emissions in lb/MMBtu based on worst case specification of fuel oil used.
- e) All records required in Appendix C, "Compliance Monitoring Plan for Recycled use Oil."

All records shall be kept on file for at least five years and made available to the Department upon request. **[R336.1205(1)(a), R336.1205(3), R336.1224, R336.1225, R336.1301, R336.1402, R336.1702, R336.1901]**

1.22 The permittee shall keep records of the following production information for EUHMAPLANT on the basis indicated:

- a) The virgin aggregate feed rate (continuous).
- b) The RAP feed rate (continuous).
- c) The asphalt paving material product temperature (intermittent).
- d) Information sufficient to identify all components of the asphalt paving material mixture (continuous).

Upon start-up, the initial mix design and time shall be recorded. When a new mix design is activated after start-up, the time and new mix design shall be recorded. All records shall be kept on file until the end of the paving season in which they were recorded and made available to the Department upon request. **[R336.1205(1)(a), R336.1205(3), R336.1224, R336.1225, R336.1702, R336.1901]**

1.23 The permittee shall keep in a satisfactory manner, monthly and 12-month rolling time period emission calculation records of all criteria pollutants and HAPs listed in the Emission Limit Table for EUHMAPLANT. If stack test results for EUHMAPLANT exist for any of the aforementioned pollutants, those stack test results may be used 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 applicable emission factor listed in the Emission Limit Table shall be used to estimate the emissions of a pollutant from EUHMAPLANT. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a), R336.1205(3), R336.1224, R336.1225, R336.1702]**

- 1.24 The permittee shall keep records, as described in Special Condition 1.15, of all CO emissions and related production data including the dates and times emissions were monitored. This data shall be used to calculate the pounds of CO emitted per ton of HMA paving materials produced. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a), R336.1205(3), R336.1224, R336.1225, R336.1702]**
- 1.25 The permittee shall keep, in a satisfactory manner, hourly, monthly and 12-month rolling time period records of the amount of HMA paving materials produced from EUHMAPLANT. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a), R336.1205(3)]**
- 1.26 The permittee shall keep, in a satisfactory manner, hourly, monthly and 12-month rolling time period records of the amount of fuel used for all fuels combusted, in gallons of fuel per ton of HMA paving materials produced, for EUHMAPLANT. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a), R336.1205(3)]**

Stack/Vent Restrictions

	Stack & Vent ID	Maximum Dimension (inches)	Minimum Height Above Ground Level (feet)	Applicable Requirements
1.27	SVHMAPLANT	34 X 50	35	R336.1225, 40 CFR 52.21(c) & (d)
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. **[R336.1371, R336.1372, 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 actual emission levels for EUYARD shall be reported 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. **[R336.1371, R336.1372, R336.1901]**

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. **[R336.1901]**

The following conditions apply to: FGFACILITY

Emission Limits

	Pollutant	Limit	Time Period	Testing/ Monitoring Method	Applicable Requirements
4.1a	Each Individual HAP	Less than 8.9 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 4.2	R336.1205(1)(a), R336.1205(3)
4.1b	Aggregate HAPs	Less than 22.4 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 4.2	R336.1205(1)(a), R336.1205(3)

Recordkeeping/Reporting/Notification

4.2 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, those stack test results may be used 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 applicable emission factor listed in the Emission Limit Table shall be used to estimate the emissions of a pollutant from FGFACILITY. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **[R336.1205(1)(a), R336.1205(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 15 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.
- 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.

Appendix A - Continued

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.

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. The record shall be maintained in the Operations Log Book.

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 THIS DOCUMENT, 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.
- b. The pressure drop across the fabric filter dust collector shall be recorded at least once per day and kept in a bound notebook. These data shall be recorded in the Daily Operations Log Book.

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.

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 two 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 - before 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 record in a bound notebook 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. A visible emission record sheet will be made available in the Daily Operations Log Book.
- All significant maintenance activities performed on the fabric filter dust collector.

Appendix C
COMPLIANCE MONITORING PLAN FOR THE CHARACTERIZATION OF RECYCLED USED OIL

Purpose: This Compliance Monitoring Plan (CMP) describes the requirements for combusting recycled used oil (RUO) in the hot mix asphalt (HMA) facility. Each Purchase Order that is executed by a facility for the purchase of recycled used oil shall be accompanied by specific requirements that the supplier must meet. The requirements include RUO characterization information, Quality Assurance/Quality Control (QA/QC) data, and a demonstration that the RUO supplied does not exceed the allowable levels for RUO properties and constituents listed in this CMP, the Permit to Install special conditions, and 40 CFR 279.11.

In Michigan, used oil management is regulated by the Michigan Department of Environmental Quality (MDEQ) by several divisions under various Parts of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), Act 207 of 1941, and the applicable Administrative Rules. In addition to the MDEQ regulations, used oil management may be subject to requirements of other agencies including, but not limited to the U.S. Environmental Protection Agency, the U.S. Department of Transportation, the Michigan Department of Consumer and Industry Services, and the local fire authorities. Information concerning applicable regulations may be obtained from the MDEQ Environmental Assistance Center, at (517) 373-9400.

REQUIREMENTS FOR SUPPLIERS OF RECYCLED USED OIL

A certificate of analysis shall be provided by the supplier upon delivery of each truckload of recycled used oil accepted for use as fuel at the facility. Each batch of RUO shall have a unique certificate of analysis. 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, a new certificate of analysis is necessary. Information to be presented on the certificate of analysis shall include:

- A unique batch identification number.
- Date of delivery.
- Dates of performance of analyses.
- Analytical methods used.
- Specific Gravity or API Gravity.
- Higher Heating Value (in Btu per pound).
- Flash Point (in degrees Fahrenheit).
- Results of analyses for arsenic, cadmium, chromium, lead, sulfur, polychlorinated biphenyls (PCBs), and total halogens.
- The AQD recommends that the appropriate allowable levels for RUO properties and constituents be listed on the certificate of analysis to simplify verification.

Appendix C - Continued

ALLOWABLE LEVELS

Allowable levels for RUO properties and constituents are listed in the Permit to Install special conditions and below:

PROPERTY/CONSTITUENT	ALLOWABLE LEVEL
Higher Heating Value	17,000 Btu per pound, minimum
Flash Point	100 degrees Fahrenheit, minimum
Arsenic	5.0 ppm, maximum
Cadmium	2.0 ppm, maximum
Chromium	10.0 ppm, maximum
Lead	100.0 ppm, maximum
Sulfur	1.0 percent, maximum
Polychlorinated Biphenyls (PCBs)	1.0 ppm, maximum
Total Halogens	1,000 ppm, maximum

ON-SITE RUO CHARACTERIZATION PROGRAM

Upon receipt of each shipment of RUO by the facility, a check shall be made to ensure no exceedances of the allowable levels for RUO properties and constituents are identified by the supplier's analytical results. A representative sample shall be screened for Total Halogens using U.S. EPA SW-846 Method 9077 and the screening results recorded. If the certificate of analysis shows an exceedance of an allowable level or the screening shows an exceedance of the allowable level for Total Halogens, the shipment shall not be accepted by the facility.

Verification of the supplier certificate of analysis information, by testing, at owner's expense, in accordance with Department requirements will be required. Random monthly sampling and analysis shall be conducted for each supplier of RUO for the first 12-months from the date of the first delivery of RUO by the supplier. Thereafter, sampling and analysis shall be conducted not less than once per calendar quarter in which RUO is received for each supplier of RUO.

Sampling: Samples shall be taken at the time of delivery from the delivery truck, prior to mixing with oil in the on-site storage tank, and labeled with the batch identification number. Sufficient RUO shall be collected to provide two samples, each of sufficient volume for the required analyses. If one of the two samples is sent to an independent laboratory for analysis, the second sample shall be kept available for duplicate analysis. Sample collection, handling, and storage shall be in accordance with the Quality Assurance Plan (QAP) to be provided by the independent laboratory. Samples shall be kept available for not less than five months from the date of collection.

Analysis: The purpose of the analysis of the RUO sample is the verification of the information provided in the supplier certificate of analysis. The required analyses are listed in the section of this CMP titled "Requirements for Suppliers of Recycled Used Oil." Results of the analyses shall be reported to the facility within the appropriate sample holding time for each analytical method to provide the opportunity for analysis of the duplicate sample.

Laboratory: A QAP shall be developed by any independent laboratory used by the facility for RUO analysis. A copy of the QAP shall be submitted by the facility to the AQD, District Office 60 days prior to the use of that laboratory. Detailed in the QAP will 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 must be consistent with

Appendix C - Continued

the methods used by the RUO supplier's laboratory. A list of acceptable QA/QC requirements may be obtained from AQD, Compliance Support Unit in Lansing. The facility shall maintain a copy of the approved QAP on site.

EXCEEDANCES OF ALLOWABLE LEVELS

All exceedances of allowable levels will be reviewed by the AQD for enforcement actions. In addition to possible enforcement actions the facility shall take all appropriate actions described in Step 1 and Step 2 below to address the exceedance.

ACTIONS TO BE TAKEN:

Step 1

If the laboratory analytical results reported under the on-site RUO characterization program show that an allowable level has been exceeded, the facility shall notify the AQD, District Office verbally within two business days after receiving these analytical results. The verbal notification shall be followed by a written report of the results within five business days after making the verbal report.

At the option of the facility, the duplicate sample may be analyzed within the appropriate sample holding time for each analytical method after the facility receives the results showing an exceedance of any allowable level. Analysis may be performed solely for that property or constituent for which an exceedance is identified.

Upon receipt of the laboratory results for the duplicate sample, the facility shall notify the AQD, District Office verbally within two business days of receiving them. The verbal notification shall be followed by a written report of the results within five business days after making the verbal report.

Step 2

When an exceedance of an allowable level is identified the facility shall:

- Notify the RUO supplier that an exceedance has occurred.
- Provide copies of the laboratory analytical results to the RUO supplier.
- Inform the RUO supplier of the required increase in sampling frequency described below.
- Explain the requirement for discontinuing RUO deliveries if a second exceedance occurs within six months.

Increase in Sampling Frequency: When an exceedance occurs, samples from three of the next six loads of RUO received from the supplier shall be collected and analyzed in accordance with the on-site RUO characterization program contained in this CMP. Thereafter, monthly random sampling shall continue for the next 12-months from the date of receipt of the load from which the exceedance occurred.

Discontinuing RUO Deliveries: If a second load of recycled used oil from the same supplier has an exceedance within six months after the first exceedance, the facility shall immediately discontinue accepting RUO deliveries from that supplier. If a supplier is terminated as a result of a second exceedance within six months, the facility shall notify the AQD, District Office in writing within ten business days that RUO deliveries from the supplier have been discontinued.

Appendix C - Continued

REPORTING REQUIREMENTS

Upon request from the AQD, District Supervisor and solely for those quarters in which RUO was delivered to the facility, summaries, based on calendar quarters, supplier certificates of analysis and the analytical results obtained from the on-site RUO characterization program shall be provided to the AQD, District Supervisor no later than thirty (30) days following the last day in the calendar quarter. Each quarterly summary shall include the following information:

- RUO supplier's name for each delivery;
- Date of each delivery and sample;
- Batch identification number;
- Whether an allowable level for RUO properties and constituents was exceeded (for each sample) and identification of which allowable level(s), if any, were exceeded.

RECORDKEEPING REQUIREMENTS

Copies of the supplier certificates of analysis, the analytical results obtained from the on-site RUO characterization program, and quarterly summaries as described above shall be kept on file for a period of at least two years from the date of receipt and made available to the AQD upon request.

INSPECTIONS

If an AQD inspector visits the facility to collect samples of the RUO, sufficient RUO shall be provided to the inspector for the required analyses listed in this Compliance Monitoring Plan.

RECYCLED USED OILS WITH HALOGEN CONCENTRATIONS OVER 1,000 PPM

An Addendum to this Compliance Monitoring Plan contains additional requirements for RUO with halogen concentrations over 1000 parts per million (ppm). The use as a fuel of RUO containing greater than 1,000 ppm halogens must be specifically allowed in the Special Conditions of the Air Use Permit for the facility.

Appendix C - Continued
COMPLIANCE MONITORING PLAN (CMP) ADDENDUM

**ADDITIONAL REQUIREMENTS FOR RECYCLED USED OIL
WITH GREATER THAN 1,000 PPM HALOGENS**

Maximum Allowable Halogen Concentration

The maximum concentration of total halogens in each batch of recycled used oil (RUO) accepted for use as fuel at the facility shall not exceed 4,000 ppm. The use as a fuel of RUO containing greater than 1,000 ppm halogens must be specifically allowed in the Special Conditions of the Air Use Permit to Install for the facility. For Permits to Install in which RUO containing up to 4,000 ppm halogens is approved for use as a fuel, the allowable level for total halogens listed as 1,000 ppm in the CMP is changed to 4,000 ppm.

Rebuttable Presumption for Used Oil

Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in 40 CFR Part 261, Subpart D.

As stated in the federal Standards for the Management of Used Oil (40 CFR 279.10(b)(1)(ii) and 40 CFR 279.63) and Michigan's Hazardous Waste Management Rules (Part 111 of the Administrative Rules, Rule 809(2)(b) [R299.8909(2)(b)]), a person may rebut the presumption by demonstrating that the used oil does not contain hazardous waste.

For each batch of RUO accepted for use as fuel, the facility shall comply with Michigan Department of Environmental Quality, Waste and Hazardous Materials Division requirements providing for used oil, once sufficiently reclaimed, to be managed as a product, thereby eliminating the need for further management as a regulated liquid industrial waste. In accordance with the provisions of 40 CFR 279.63(d), records of analyses conducted or information used to comply with the requirements shall be kept on file for a period of at least three years and made available to the AQD upon request.

Additional Analytical Requirements

The following analytical requirements are in addition to those contained in the CMP. Results of analyses for the halogenated solvents listed below shall be included on the certificate of analysis to be provided by the RUO supplier and as part of the on-site RUO characterization program.

The maximum allowable level of 100 ppm is established for each of the following hazardous halogenated compounds listed by the U.S. EPA as a hazardous spent solvent (i.e., EPA Hazardous Waste Numbers F001 and F002).

List of Halogenated Solvents: carbon tetrachloride; chlorobenzene; 1,2-dichlorobenzene; dichlorodifluoromethane; methylene chloride; tetrachloroethylene; 1,1,1 trichloroethane; 1,1,2-trichloroethane; 1,1,2-trichloro-1,2,2- trifluoroethane; trichloroethylene; and trichlorofluoromethane.