

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

April 30, 2018

PERMIT TO INSTALL
310-06C

ISSUED TO
Ajax Materials Corporation

LOCATED AT
8744 South Inkster Road
Romulus, Michigan

IN THE COUNTY OF
Oakland

STATE REGISTRATION NUMBER
B3120

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:

March 23, 2018

DATE PERMIT TO INSTALL APPROVED:

April 30, 2018

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO _{2e}	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H ₂ S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM ₁₀	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM _{2.5}	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO ₂	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 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 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 R 336.1219 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 R 336.1219. The written request shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(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.
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 700 tons per hour counterflow 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 silos.	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 1.18, 1.23, 1.24	40 CFR 60, Subparts A & I
1.1b	PM	0.04 lb per ton ²	Test Protocol ³	SC 1.17, 1.24, 1.27, 1.29	R 336.1205(1)(a), R 336.1205(3)
1.1c	CO	0.201 lb per ton ²	Test Protocol ³	SC 1.17, 1.20, 1.28, 1.29	R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702
1.1d	CO	89.9 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 1.27, 1.29	R 336.1205(1)(a), R 336.1205(3)
1.1e	SO ₂	0.169 lb per ton ²	Test Protocol ³	SC 1.17, 1.25, 1.29	R 336.1205(1)(a), R 336.1205(3)
1.1f	SO ₂	75.6 tpy	12-month rolling time period as determined at the end of each calendar month.	SC 1.27, 1.29	R 336.1205(1)(a), R 336.1205(3)
1.1g	NO _x	0.12 lb per ton ²	Test Protocol ³	SC 1.17, 1.27	R 336.1205(1)(a), R 336.1205(3)
1.1h	Lead	1.5×10 ⁻⁵ lb per ton ²	Test Protocol ³	SC 1.17, 1.29	R 336.1225
1.1i	Benzene	0.0009 lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1j	Toluene	0.006 lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1k	Ethylbenzene	0.005 lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1l	Xylene	0.001 lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1m	Naphthalene	0.001 lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1n	Formaldehyde	0.007 lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1o	Acrolein	0.0008 lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1p	Arsenic	1.5×10 ⁻⁶ lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1q	Nickel	1.5×10 ⁻⁴ lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1r	H ₂ SO ₄	0.015 lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1s	Manganese	5.0×10 ⁻⁵ lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225
1.1t	Hydrogen Chloride	0.024 lb per ton ²	Test Protocol ³	SC 1.16, 1.20, 1.27, 1.29	R 336.1224, R 336.1225

¹ Annual limits based on 895,000 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. **(R 336.1224, R 336.1225, R 336.1702)**
- 1.3 The sulfur content of all distillate (No. 1, 2) fuel oil used in EUHMAPLANT shall not exceed 0.30 percent by weight. The sulfur content of all residual (No. 4, 5, & 6) fuel oil used in EUHMAPLANT shall not exceed 0.70 percent by weight. **(R 336.1201(3), 45 FR 29720, 55 FR 11029, Michigan State Implementation Plan)**
- 1.4 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, or ash content 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	4000.0	ppmw
Sulfur	1.0	Weight %
Minimum Flash Point	100.0	°F
Maximum Ash Content	1.0	Weight %

- 1.5 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)**
- 1.6 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)**
- 1.7 The permittee shall not process more than 895,000 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))**
- 1.8 The permittee shall not process more than 700 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. **(R 336.1224, R 336.1225, R 336.1702)**

Process/Operational Limits

- 1.9 The permittee shall not operate EUHMAPLANT unless the Fugitive Dust Control Plan for EUYARD specified in Appendix A has been implemented and is maintained. **(R 336.1371, R 336.1372, Act 451 324.5524)**
- 1.10 The permittee shall not operate EUHMAPLANT unless a Preventative Maintenance/ Malfunction Abatement Plan (PM/MAP) as described in Rule 911(2) is developed, implemented and maintained. If at any time the PM/MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 90 days after such an event occurs. The permittee shall also amend the PM/MAP within 90 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the PM/MAP and any amendments to the PM/MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the PM/MAP or amended PM/MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803)**

- 1.11 The permittee shall not operate EUHMAPLANT unless the Emission Abatement Plan for Startup, Shutdown and Malfunctions specified in Appendix B has been implemented and is maintained. **(R 336.1911, R 336.1912)**
- 1.12 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))**
- 1.13 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. This shall be done at the start of each paving season or upon a malfunction of EUHMAPLANT as shown by the CO emission monitoring data.
- 1.14 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

- 1.15 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. No less than 30 days prior to testing, 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 commencement of trial operation. **(R 336.1901, R 336.2001, R 336.2003, R 336.2004)**
- 1.16 Verification and quantification of emission rates of the TACs listed below from EUHMAPLANT, by testing at owner's expense, in accordance with Department requirements, may be required for continued operation. No less than 30 days prior to testing, 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 commencement of trial operation. TACs: acrolein, arsenic, benzene, ethylbenzene, formaldehyde, lead, manganese, naphthalene, nickel, sulfuric acid mist, toluene, xylene, and hydrogen chloride. **(R 336.1225, R 336.2001, R 336.2003, R 336.2004)**
- 1.17 Verification and quantification of emission rates of CO and SO₂ from EUHMAPLANT, by testing at owner's expense, in accordance with Department requirements, may be required for continued operation. No less than 30 days prior to 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 one calendar year of commencement of trial operation. **(R 336.1205(1)(a), R 336.1205(3), R 336.2001, R 336.2003, R 336.2004)**
- 1.18 Unless the initial test has been conducted previously, Federal Standards of Performance for New Stationary Sources require verification of particulate emission rates from EUHMAPLANT, by testing at owner's expense, in accordance with 40 CFR Part 60 Subparts A and I. The permittee shall notify the AQD District Supervisor in writing within 15 days of the date of commencement of trial operation in accordance with 40 CFR 60.7(a)(3). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 60 Appendix A. No less than 30 days prior to 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 to the AQD within 60 days following the last date of the test. **(40 CFR Part 60 Subparts A & I)**

Monitoring

- 1.19 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)**
- 1.20 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 CO emissions should be less than 500 ppmv to ensure EUHMAPLANT is operating properly. One data set shall be recorded for each of the following occurrences:
- Upon start-up of each paving season.
 - Upon a malfunction of the drum dryer or its associated burner.
 - 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. 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. **(R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702, R 336.1901)**

Recordkeeping/Reporting/Notification

- 1.21 All required calculations shall be completed in a format acceptable to the AQD District Supervisor 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, R 336.1205(1)(a))**
- 1.22 Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUHMAPLANT. **(R 336.1201(7)(a))**
- 1.23 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)**
- 1.24 The permittee shall conduct all necessary maintenance and make all necessary attempts to keep all 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 specified in 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. **(R 336.1910, R 336.1911)**
- 1.25 The permittee shall keep the following records for each calendar month that EUHMAPLANT is operated:
- Identification, type and the amounts (in gallons) of all fuel oils combusted.
 - Sulfur content (percent by weight), specific gravity, flash point, and higher heating value (Btu/lb) of all fuel oils being combusted.
 - Tons of hot mix asphalt containing RAP produced, including the average percent of RAP per ton of hot mix asphalt produced containing RAP.

All records shall be kept on file for at least five years and made 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)**

- 1.26 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 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. **(R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702, R 336.1901)**

- 1.27 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 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. **(R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702)**

- 1.28 The permittee shall keep records, as described in SC 1.20, of all CO emissions and related production data including the dates and times emissions were monitored. This data shall be used to ensure proper operation of the drum dryer or associated burner. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205(1)(a), R 336.1205(3), R 336.1224, R 336.1225, R 336.1702)**

- 1.29 The permittee shall keep, in a satisfactory manner, daily, 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. **(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
1.30	SVHMAPLANT	84	120	R 336.1225, 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 B has been implemented and is maintained. **(R 336.1371, R 336.1372, Act 451 324.5524)**

Recordkeeping/Reporting/Notification

- 2.2 All required calculations shall be completed in a format acceptable to the AQD District Supervisor 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)**
- 2.3 The permittee shall calculate in a satisfactory manner, the annual fugitive dust emissions of particulate matter on a once per calendar year basis in accordance with the MAERS reporting schedule herein described. 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. **(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)**
- 4.2 The permittee shall not operate EUSILOS unless all the silo loadout activities occur in an area from which the emissions are controlled. Emissions collected from the truck load-out area shall be vented into the burning zone of EUHMAPLANT or controlled by equivalent means. The permittee shall not operate EUSILOS unless the silo load-out control system is installed, maintained and operated in a satisfactory manner. **(R 336.1901)**
- 4.3 The permittee shall not operate EUSILOS unless a Preventative Maintenance/ Malfunction Abatement Plan (PM/MAP) as described in Rule 911(2) is developed, implemented and maintained. If at any time the PM/MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 90 days after such an event occurs. The permittee shall also amend the PM/MAP within 90 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the PM/MAP and any amendments to the PM/MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the PM/MAP or amended PM/MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803)**

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 5.3	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 5.3	R 336.1205(1)(a), R 336.1205(3)

Recordkeeping/Reporting/Notification

- 5.2 All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made 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)**
- 5.3 The permittee shall calculate the actual emissions of HAPs from FGFACILITY based on the most recent 12-month rolling time period as determined at the end of each calendar month. 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. **(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 controlled by the application of water, sweeping, vacuuming, or other acceptable dust control method 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 controlled by the application of water, sweeping, vacuuming, or other acceptable dust control method 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.

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

EMISSION ABATEMENT PLAN FOR STARTUP, SHUTDOWN AND MALFUNCTIONS

NORMAL STARTUP PROCEDURE

The plant computer controls plant startup. At startup the plant operator will enter the mix design, the tons per hour and the number of tons to be produced into the plant operations computer. Once the operator starts the equipment the computer will start the cold feed bins and set the feed rate (tons per hour) requested. The feed rate will be different for each mix design and production rate.

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 fed to the mixer. The two products (aggregate and 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.

NORMAL SHUTDOWN PROCEDURE

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 design so that the last of the aggregate and the asphalt cement meet at the mixing drum together.

Any mix that is waste is discharged into the loader bucket, dump truck or into a holding area under the drag slat discharge gate and is taken to the RAP pile for later crushing

HOT STOPS - HOT STARTS

If the silos become too full, the plant operator may have to make a hot stop, (dryer and mixer full of material). No material is discharged during a hot stop. The plant can remain in this mode for up to two hours.

After a hot stop, the plant will make a hot start. The exhaust fan and burner will be started and once running, the rest of the plant will be started. Cold or off-spec material is discharged through the drag slat discharge gate and placed in the RAP pile for later use.

MALFUNCTION STOPS

If a malfunction (computer or mechanical) occurs during drying/mixing operations, a hot stop will be initiated until the problem is corrected. If the problem cannot be corrected and the dryer/mixer must be emptied, the asphalt cement can be controlled manually. This will be done only after all attempts to correct the problem are exhausted.

If the asphalt pump fails and cannot be repaired, the drum will be emptied of mixed material until the discharged aggregate gets dusty. The drum will then be stopped and the asphalt pump repaired.

A water supply at each location can be used to knock down any blowing dust.

Appendix B – Continued

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 during startups, shutdowns, or malfunctions, as well as inspections and repairs, shall be stated on the updated list.

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 carried out continuously throughout the day by the plant operator and the loader operator during operations. The following items shall be inspected/observed:

- Roadways (fugitive dust)
- Cold feed bins (falling aggregate)
- Aggregate feed belts (falling aggregate)
- Dryer (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)
- Chutes, screw augers, and housings (for any leaks)

A more thorough inspection will be done during the winter shutdown (between December 1 and April 1) for maintenance and repairs. The following items will be inspected and repairs made as 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. (Additional visual inspections may be required before and during the paving season as required by Appendix B). The following 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

Appendix B – Continued

REPLACEMENT PARTS

As required by Appendix B, the following shall be kept in stock at all times:

A minimum of 15 bags.

A minimum of 5 pounds of black light powder. (Recommended quantity for the number of square feet of baghouse cloth.)

A minimum of two (2) tubes of silicone caulk for minor leaks around doors and seals.

BAGHOUSE VARIABLES AND MONITORING

The baghouse is monitored continuously (as specified in Appendix B) 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 water gauge. If the pressure rises above 10 inches water gauge, signaling an inoperative diaphragm valve, the plant shall be stopped and the defective valve repaired or replaced. If the differential pressure drops below 2 inches water gauge the company shall inspect for a torn bag or a problem with the tubesheet between the dirty and clean side of the baghouse. This problem will also result in a dirty stack. The only time the baghouse will normally drop below 2 inches water gauge is if a large number of filter bags are replaced.

If a large number of bags are replaced (over 100) the pressure on the magnehelic will drop slightly. This drop will 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 a stack temperature of 375/400 degrees Fahrenheit.

CORRECTIVE PROCEDURES AND RESPONSIBLE PERSONS

This startup, shutdown, malfunction plan shall be followed to meet the compliance limits. If the limits are exceeded it is 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.

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 must be brought up slowly by manually adjusting the burner. As the operator opens the burner, the exhaust fan damper must also be opened to maintain one 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. A discharge temperature that is too high will cause blue smoke. A temperature that is too low will produce an unacceptable 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 10 inches water gauge. The differential pressure can be adjusted by opening or closing the exhaust damper. The operator shall keep between one quarter and one half-inch draw on the burner end for maximum efficiency.

Along with monitoring the above items the operator shall monitor the weather to determine any changes to the moisture levels in the aggregate and RAP. The moisture content determines how to adjust the burner to reach the desired mix discharge temperature.

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

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

Each shipment from the used oil supplier must be accompanied by documentation demonstrating that the used oil meets specification levels in 40 CFR 279.11 (Standards for the Management of Used Oil) and R 299.9809, promulgated pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The documentation shall include supplier certification and analytical data. The analysis must be for the batch of used oil accepted for use as a fuel by the permittee. Separate truckloads may have identical documentation from the supplier if 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., 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 certificate of analysis shall be reviewed by the permittee to ensure that the RUO properties and constituents do not exceed any of the used oil specifications contained in the following table prior to acceptance and off-loading of the shipment.

TABLE 1 - ALLOWABLE LEVELS FOR RUO

Property/Constituent	Allowable Level
Higher Heating Value	17,000 Btu per pound (minimum)
Arsenic	5.0 ppmw (maximum)
Cadmium	2.0 ppmw (maximum)
Chromium	10.0 ppmw (maximum)
Lead	100.0 ppmw (maximum)
Sulfur	1.0 percent (maximum)
Polychlorinated Biphenyls (PCBs)	1.0 ppmw (maximum)
Total Halogens	4,000 ppmw (maximum)

Verification: Shipping records for each load received shall be maintained a minimum of five 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." The sample shall be screened for Total Halogens using SW-846 Method 9077.

Verification: Records of the Total Halogens test results shall be maintained a minimum of five 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 certificate of analysis for the batch. The laboratory analysis shall include the properties and constituents listed in Table 1. 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.

Appendix C – Continued

Any independent laboratory used by the facility for RUO analysis shall develop a Quality Assurance Plan (QAP). 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. The facility shall maintain a copy of the approved QAP on site or at the corporate offices and be available for AQD inspection.

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.

For a single batch of RUO, the laboratory analysis shall 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 supplier's 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 required to complete the quarterly sample analysis in Method 2.

Verification: A list of RUO batches that have been pre-qualified, along with records of the RUO analytical data from both the supplier and the permittee for the same batch, shall be maintained a minimum of five years.

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

When the permittee accepts RUO that is not pre-qualified by Method 1, 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 accepted by the permittee that are not pre-qualified by Method 1. 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 records of the RUO analytical data from both the supplier and the permittee for the same batch, shall be maintained a minimum of five years.