Ohio Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

Certified Mail

5/31/2016

No	TOXIC REVIEW
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Doug Woodhall
OHIO TAR AND ASPHALT DIV CENTRAL ALLIED ENTERPRISES INC
2905 Columbus Rd. NE
Canton, OH 44705

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 1576000028
Permit Number: P0100918
Permit Type: Renewal
County: Stark

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**
- **What should you do if you notice a spill or environmental emergency?**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

What should you do if you notice a spill or environmental emergency?

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

If you have any questions regarding your permit, please contact Canton City Health Department at (330)489-3385 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: Canton

FINAL

Division of Air Pollution Control
Permit-to-Install and Operate
for
OHIO TAR AND ASPHALT DIV CENTRAL ALLIED ENTERPRISES INC

Facility ID:	1576000028
Permit Number:	P0100918
Permit Type:	Renewal
Issued:	5/31/2016
Effective:	5/31/2016
Expiration:	5/31/2021

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install and Operate
for
OHIO TAR AND ASPHALT DIV CENTRAL ALLIED ENTERPRISES INC

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Authorization

Facility ID:	1576000028
Application Number(s):	A0032662, A0038644, A0051152
Permit Number:	P0100918
Permit Description:	FEPTIO renewal permit incorporating additional federally enforceable restrictions for P902 (Asphalt Batch Plant with Cyclone & Scrubber) and administrative modifications for P904 (Asphalt Drum Mix Plant with Baghouse) in the form of increased VOC limits to match stack testing results and edits to process description for a modified burner configuration.
Permit Type:	Renewal
Permit Fee:	$0.00
Issue Date:	5/31/2016
Effective Date:	5/31/2016
Expiration Date:	5/31/2021

Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

OHIO TAR AND ASPHALT DIV CENTRAL ALLIED ENTERPRISES INC
2905 COLUMBUS RD NE
Canton, OH 44705

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Canton City Health Department
420 Market Avenue
Canton, OH 44702-1544
(330)489-3385

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s))listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0100918
Permit Description: FEPTIO renewal permit incorporating additional federally enforceable restrictions for P902 (Asphalt Batch Plant with Cyclone & Scrubber) and administrative modifications for P904 (Asphalt Drum Mix Plant with Baghouse) in the form of increased VOC limits to match stack testing results and edits to process description for a modified burner configuration.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	**P902**
Company Equipment ID:	Asphalt Batch Plant with Cyclone & Scrubber
Superseded Permit Number:	P0073745
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P904**
Company Equipment ID:	Asphalt Drum Mix Plant with Baghouse
Superseded Permit Number:	15-01553
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

PTIO fee.This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

Annual emissions fee.Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as beingpermanently shut down without first applying for and obtaining a permit pursuantto OAC Chapter 3745-31.

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

   a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

      (1) None.

   b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

      (1) None.

2. The following emissions unit in this permit is subject to New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart I, for Hot Mix Asphalt Facilities: P904. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA, District Office or local air agency.

C. Emissions Unit Terms and Conditions

1. P904, Asphalt Drum Mix Plant with Baghouse

Operations, Property and/or Equipment Description:

Counter-flow drum mix, hot mix asphalt (HMA) plant. Continuous operation, maximum production capacity 340 tons per hour. The aggregate dryer, rated heat input capacity of 120 million Btu per hour, burns natural gas, on-spec used oil, #2 fuel oil and #4 fuel oil. The aggregate mix includes limestone, sand, and gravel. Recycled asphalt pavement (RAP) and slag added to the raw ingredient mix. Particulate matter emissions controlled by a fabric filter (baghouse). Note: This unit formerly named P004.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. d)(13) and e)(7).

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)b., c)(3), d)(5), e)(2)(a)i. and ii.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) [Best Available Technology (BAT) established in PTI 15-01553 issued 06/17/2004 and administratively modified in this permit]	<u>Stack Emissions</u> Particulate emissions (PE) and particulate matter 10 microns or less in diameter (PM_{10}) shall not exceed 0.04 grains per dry standard cubic foot of exhaust gases, when burning any approved fuel. Visible PE from the stack shall not exceed 20% opacity, as a 3-minute average. Volatile organic compound (VOC) emissions shall not exceed 27.89 pounds

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		per hour, when burning natural gas. VOC emissions shall not exceed 36.48 pounds per hour, when burning #2 fuel oil, #4 fuel oil, or on-spec used oil. Carbon monoxide (CO) emissions shall not exceed 39.00 pounds per hour, when burning any approved fuel. Sulfur dioxide (SO_2) emissions shall not exceed 1.16 pounds per hour, when burning natural gas. SO_2 emissions shall not exceed 28.5 pounds per hour, when burning natural gas while processing slag to produce HMA. SO_2 emissions shall not exceed 17.40 pounds per hour, when burning #2 fuel oil, #4 fuel oil, or on-spec used oil. SO_2 emissions shall not exceed 35.6 pounds per hour, when burning #2 fuel oil, #4 fuel oil, or on-spec used oil while processing slag to produce HMA. Nitrogen oxides (NO_x) emissions shall not exceed 45.0 pounds per hour, when burning any approved fuel. <u>Fugitive Emissions</u> Fugitive PE shall not exceed 4.74 pounds per hour, when burning any approved fuel. Fugitive PM_{10} shall not exceed 2.57 pounds per hour, when burning any approved fuel. Visible PE from fugitive dust (from areas other than enclosures for the rotary drum and the hot mix asphalt elevator) shall not exceed 10% opacity, as a 3-minute average.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		There shall be no visible emissions of fugitive dust from the enclosures for the rotary drum and the hot mix asphalt elevator. The baghouse shall be operated with sufficient air volume to minimize or eliminate fugitive emissions from the rotary drum. The aggregate loaded into the storage bins shall have a moisture content sufficient to minimize or eliminate the visible fugitive particulate emissions from conveyors and all transfer points to the dryer. The drop height of the front end loader bucket shall be minimized to the extent possible in order to minimize or eliminate visible particulate emissions of fugitive dust from the aggregate storage bins The requirements established pursuant to this rule also include compliance with the requirements of OAC rule 3745-31-05(D) and 40 CFR Part 60 Subpart I. See b)(2)a. through (2)i., c)(1), (2), and c)(4) through (9).
b.	OAC rule 3745-31-05(D) [Synthetic minor to avoid Title V, major New Source Review and State modeling requirements for SO_2 emissions established in PTI 15-01553 issued 06/17/2004 and administratively modified in this permit]	<u>Stack Emissions</u> PE/PM_{10} shall not exceed 4.52 tons per rolling 12-month period. VOC emissions shall not exceed 23.52 tons per rolling 12-month period. SO_2 emissions shall not exceed 24.92 tons per rolling 12-month period. NO_x emissions shall not exceed 31.50 tons per rolling 12-month period. CO emissions shall not exceed 27.30 tons per rolling 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<u>Fugitive Emissions</u> Fugitive emissions from Asphalt Load Out Operations: PE/PM_{10} shall not exceed 0.11 ton per rolling 12-month period. VOC emissions shall not exceed 0.81 ton per rolling 12-month period. CO emissions shall not exceed 0.28 ton per rolling 12-month period. Fugitive emissions from Asphalt Silo Filling Operations: PE/PM_{10} shall not exceed 0.12 ton per rolling 12-month period. VOC emissions shall not exceed 2.52 tons per rolling 12-month period. CO emissions shall not exceed 0.25 ton per rolling 12-month period. Fugitive emissions from Cold End Operations (cold aggregate, sand, & RAP loading & transfer operations): PM_{10} shall not exceed 1.36 tons per rolling 12-month period. See c)(3).
c.	OAC rule 3745-17-07(A)(1) OAC rule 3745-17-07(B) OAC rule 3745-17-08 OAC rule 3745-17-11(B)(1) OAC rule 3745-18-06(E) 40 CFR Part 60, Subpart I	The emissions limitations specified by these rules are less stringent or equivalent to the emission limitations established pursuant to OAC rule 3745-31-05(A)(3) and OAC rule 3745-31-05(D).

(2) Additional Terms and Conditions

a. The permittee shall apply for and, if required, obtain a modification to this permit or obtain a new final federally enforceable permit-to-install and operate (FEPTIO) prior to making any change to equipment, change in fuels burned, change in the

method of operation, or any other change to this emissions unit that results in an increase in the allowable emissions or results in an increase in emissions of greater than the de minimis levels in OAC rule 3745-15-05 for any type of air contaminant not previously emitted.

b. The permittee shall properly install (or have properly installed), adjust, operate, and maintain a baghouse to serve this emissions unit, including enclosures, ductwork, fans, and any other equipment necessary to capture, contain, and vent particulate emissions to the baghouse serving this emissions unit, in accordance with the manufacturer's recommendations, instructions, and operating manuals, and to the extent possible with good engineering design.

c. The process emissions from this emissions unit shall be vented to a baghouse at all times the emissions unit is in operation.

d. All #2 oil burned in this emissions unit shall have a sulfur content equal to or less than 0.5 percent, by weight. For each shipment of #2 oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)).

e. All #4 oil burned in this emissions unit shall have a sulfur content equal to or less than 0.8 percent, by weight. For each shipment of #4 oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)).

f. All on-spec used oil burned in this emissions unit shall have a sulfur content equal to or less than 0.5 percent, by weight. For each shipment of on-spec used oil received for burning in this emissions unit, the permittee shall collect or require the oil supplier to collect a representative grab sample of oil and shall maintain records of the total quantity of oil received, the permittee's or oil supplier's analyses for sulfur content and heat content, and the calculated sulfur dioxide emission rate (in lbs/mmBtu). (The sulfur dioxide emission rate shall be calculated in accordance with the formula specified in OAC rule 3745-18-04(F)).

g. Each shipment of oil burned in this emissions unit shall be "on-specification" (on-spec) oil and shall meet the used oil specifications contained in OAC rule 3745-279-11. The permittee shall determine that the used fuel oil meets these specifications by performing analyses or obtaining copies of analyses or other information from the supplier documenting that the used fuel oil does not exceed (except for flash point which shall not fall below) the following limitations:

Contaminant/Property	Allowable Specifications
arsenic	5 ppm, maximum
cadmium	2 ppm, maximum
chromium	10 ppm, maximum
total halogens	less than 1,000 ppm; or 4,000 ppm maximum if the presumption that the used oil contains hazardous waste is rebutted, as described below
lead	100 ppm, maximum
flash point	100°F, minimum

The used oil burned in this emissions unit shall contain less than the quantifiable levels of PCBs as defined in 40 CFR 761.3, and also shall not exceed the following mercury limitation nor fall below the following heating value:

heat content	135,000 Btu/gallon, minimum
PCB's	less than 2 ppm
mercury	1 ppm, maximum

Used oil containing 1,000 ppm or greater total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under paragraph (B)(1) of rule 3745-279-10 of the Administrative Code. The permittee may receive and burn used oil equaling or exceeding 1,000 ppm total halogens, but less than 4,000 ppm, only if the permittee has successfully demonstrated, pursuant to OAC rule 3745-279-63,that the used oil does not contain a listed hazardous waste, by either acquiring and maintaining source process information which demonstrates that the used oil was contaminated by halogenated constituents that would not be listed hazardous waste or by demonstrating that the used oil does not contain significant concentrations of halogens by acquiring and maintaining representative analytical data. Acceptable analytical test protocols that can be used to analyze used oil for halogenated hazardous constituents include SW-846 Test Methods 9075, 9076, and 9077.*

If analytical results demonstrate that used oil containing 1,000 ppm or more total halogens, but less than 4,000 total halogens, does not contain greater than 100 ppm of any individual halogenated hazardous constituent found in the F001 and F002 listings in OAC rule 3745-51-31 and there is no information suggesting that any other halogenated hazardous constituent (e.g., chlorinated pesticides) has come in contact with the oil, then the presumption that the oil contains hazardous waste has been successfully rebutted.** The rebuttable presumption does not apply to either metal working oils/fluids containing chlorinated paraffins, if

processed through a tolling arrangement as described in OAC rule 3745-279-24(C), or used oils contaminated with chlorofluorocarbons removed from refrigeration units.

The burning of used oil not meeting the above limitations is prohibited in this emissions unit and the fuel oil analyses shall document compliance with each limitation before it is burned. The management and burning of used oil is subject to the Standards for the Management of Used Oil, OAC Chapter 3745-279, and the permittee shall document and assure that used oils burned in this emissions unit meet all of the applicable requirements of this Chapter. If the used oil analyses shows total halogens of 1,000 ppm or greater, the permittee shall obtain and maintain all the necessary records to successfully rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste in accordance with this permit.

*EPA publication SW-846, 3rd (or most current) edition, is available from the Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954; 202/512-1800, document number 955-001-00000-1.

**DHWM policy documented in "Used Oil Burners - New Guidance for Rebuttable Presumption", published April 2008 or most current policy.

h. All slag materials processed in this emission unit shall have a sulfur content equal to or less than 0.5 percent, by weight. The composition of slag shall not exceed the normal aggregate component of the asphalt product. The SO_2 limits contained in this permit represent this potential hourly usage, therefore daily record keeping of the slag component is not required.

i. All aggregates and reclaimed asphalt pavement (RAP) processed in this emissions unit shall have an organic material content less than 0.2 percent, by weight.

c) Operational Restrictions

(1) The permittee shall employ the baghouse serving this emissions unit at all times the emissions unit is in operation.

(2) The permittee may not receive or burn any used oil which does not meet the standards in OAC rule 3745-279-11 and the specifications listed in term b)(2)g. of this permit without first obtaining a permit-to-install or permit-to-install and operate that authorizes the burning of off-specification used oil. The burning of off-specification used oil, is subject to OAC rules 3745-279-60 through 67, is prohibited as a fuel in this emissions unit.

(3) The permittee has requested a federally enforceable limitation on asphalt produced in order to restrict the federally enforceable potential to emit. Annual asphalt production from emissions unit P904, using any approved fuel or combination of approved fuels, shall not exceed 420,000 tons per year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing asphalt production records such that first year monthly asphalt production limitations are not required.

(4) The permittee may substitute RAP in the raw material feed mix in amounts not to exceed 50 percent of total raw materials.

(5) The permittee shall only burn natural gas, #2 fuel oil, #4 fuel oil, and/or on-spec used oil in this emissions unit.

(6) When a scheduled/planned fuel switch occurs, the permittee shall complete the emission testing required in f)(2) for that fuel in accordance with f)(2)b. and shall perform burner tuning in accordance with f)(3)e.

In the event that the primary fuel supply is unexpectedly interrupted and an unscheduled/unplanned fuel switch is necessary, the permittee shall notify Ohio EPA, District Office or local air agency within three business days after the fuel switch occurs.

(7) Number 2 fuel oil burned in this emissions unit shall meet U.S. EPA's specifications for Ultra Low Sulfur Diesel (ULSD) found in 40 CFR 80.510(c).

(8) The permittee shall only use virgin aggregate, liquid asphalt, slag, and RAP in the raw material feed mix in amounts not to exceed those amounts specified in the application.

(9) No unapproved materials shall be used in the raw material feed mix without prior written notification to and written approval from Ohio EPA or Local air agency.

(10) The permittee shall restrict the hourly production level (averaged daily) for this emissions unit to 115% or less of the average hourly production level achieved during the most recent stack test that demonstrated compliance with the applicable emissions limitations. [During the most recent stack tests that demonstrated compliance with the applicable emissions limitations, the average hourly production level achieved was 325 tons per hour (August 10, 2006).]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall receive and maintain the chemical analyses from the supplier/marketer for each shipment of used oil burned in this emissions unit (or if the oil is generated on site, the permittee shall conduct the chemical analyses), which shall contain the following information:

a. the date the used oil was received at the facility and the amount received;

b. the name, address, and U.S. EPA identification number (if applicable) of the generator, transporter, processor/refiner, supplier, and/or marketer;

c. the results of the following chemical analyses, demonstrating that the used oil meets the standards in OAC rule 3745-279-11:

i. arsenic content, in ppm;

ii. cadmium content, in ppm;

iii. chromium content, in ppm;

iv. lead content, in ppm;

v. total halogens content, in ppm; and

vi. flashpoint, in ^{o}F

d. where the chemical analysis shows a total halogen content between 1,000 ppm, and below 4,000 ppm, the successful demonstration for the rebuttal of the presumption that the used oil contains or has been mixed with a listed hazardous waste, as described in OAC rule 3745-279-63(C); and

e. the results of the analyses demonstrating that the used oil meets the heat content value and the mercury and PCB limitations contained in this permit.

Each analysis shall be kept in a readily accessible location for a period of not less than 5 years* following the receipt of each shipment of used oil and shall be made available to the Ohio EPA Division of Hazardous Waste Management and/or the Division of Air Pollution Control (the appropriate Ohio EPA District Office or local air agency) upon verbal or written request. Any authorized representative of the Ohio EPA may sample or require sampling of any used oil shipments received, stored, or burned by/at this facility for periodic detailed chemical analyses through an independent laboratory.

*The Division of Air Pollution Control requires these records to be maintained for 5 years.

(2) The permittee shall document when the baghouse serving this emissions unit was not in service when the emissions unit was in operation.

(3) In order to maintain compliance with the applicable PE/PM_{10} emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 2.0 to 8.0 inches of water based upon the emission testing conducted in April 2003.

(4) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The permittee shall record the pressure drop across the baghouse on a daily basis.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The permitted range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrates compliance with the allowable PE emissions rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(5) The permittee shall maintain monthly records of the following information:

a. the total asphalt production, in tons for each month;

b. the total asphalt produced, in tons, for each fuel type for each month;

c. the rolling, 12-month summation of the total asphalt production, and asphalt production by fuel type, calculated by adding the current month's asphalt production to the asphalt production for the preceding eleven calendar months;

d. the rolling, 12-month summation of the PM_{10}, SO_2, NO_x, VOC and CO emissions;

e. the maximum percentage of RAP used for any mix type; and

f. the tons of aggregate, natural sand, and slag used for each ton of asphalt produced.

(6) The permittee shall maintain daily records of the following information:

a. the asphalt production, in tons for each day;

b. the operating hours of the continuous HMA plant for each day; and

c. the average operating rate, in tons per hour.

(7) The permittee shall maintain documents provided by the oil supplier for each shipment of number 2 fuel oil to demonstrate compliance with the ULSD requirement. These documents must include the receipt or bill of lading that includes confirmation that the fuel meets the number 2 diesel fuel ULSD standard.

For each shipment of #4 fuel oil and on-spec used oil received for burning in this emissions unit, the permittee shall maintain records of the total quantity of oil received and the permittee's or oil supplier's analyses for sulfur content and heat content. A shipment may be comprised of multiple tank truck loads from the same supplier's batch, and the quality of the oil for those loads may be represented by a single batch analysis from the supplier.

(8) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for: (1) any visible particulate emissions from the stack serving this emissions unit; and (2) any visible emissions of fugitive dust (from areas other than the enclosures for the rotary drum and the hot mix asphalt elevator) from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission event; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission event has occurred. The observer does not have to document the exact start and end times for the visible emission event under item d above or continue the daily check until the event has ended. The observer may indicate that the visible emission event was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit

continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

(9) The permittee shall perform daily visible emission checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the enclosures for the rotary drum and the hot mix asphalt elevator serving this emissions unit. If visible emissions are observed, the permittee shall note the following in the operation log:

a. the location and color of the visible emissions;

b. the cause of the visible particulate emissions;

c. the total duration of any visible emissions incident; and

d. any corrective actions taken to minimize or eliminate the visible emissions.

(10) Each calendar quarter that slag is processed in this emission unit, the permittee shall collect a representative composite sample of slag from its storage pile, for analysis of sulfur content; or shall obtain an acceptable sulfur content analysis from a representative sample of each shipment of slag, as received from the supplier. A sufficient number of individual samples shall be collected so that each composite sample is representative of the average sulfur content of the slag being processed in the emissions unit that day. Sampling shall be performed in accordance with ASTM method D2234, Collection of a Gross Sample of Coal. The permittee shall analyze the composite sample of slag for sulfur and maintain records which identify:

a. the date and time period for processing of the slag;

b. the company's hot mix asphalt (HMA) mix identification number;

c. the tons of HMA processed using slag;

d. the maximum percent, by weight, of slag in any ton of HMA produced;

e. the name and address of the slag supplier;

f. the supplier’s USEPA identification number; and

g. the concentration of sulfur in the slag, in pounds of sulfur per ton slag.

The method used to analyze slag for sulfur shall be approved by the appropriate Ohio EPA, District Office or local air agency prior to conducting the analysis.

(11) Each calendar quarter the permittee shall collect a representative composite sample from the storage pile of aggregate and RAP processed in this emissions unit, for analysis of the organic content; or shall obtain an acceptable organic content analysis from a representative sample of each shipment of aggregate and RAP, as received from the supplier. A sufficient number of individual samples shall be collected so that each composite sample is representative of the average organic matter content of the aggregate and RAP being stored. Sampling shall be performed in accordance with

ASTM method D2234, Collection of a Gross Sample of Coal. The permittee shall analyze the composite sample of aggregate and RAP for organic matter and maintain records which identify:

a. the date and time period for processing of the aggregate and RAP sampled;

b. the company's HMA mix identification number;

c. the tons of HMA processed using the aggregate and RAP; and

d. the concentration of organic matter in the aggregate, in pounds of organic matter per ton of material.

The analytical method used shall be approved by the appropriate Ohio EPA, District Office or local air agency prior to conducting the organic matter analysis.

(12) The permittee shall perform burner tuning in accordance with term f)(3) below. While performing each burner tuning, the permittee shall record the results of the burner tuning using the *Burner Tuning Reporting Form for Asphalt Concrete Plants* form (as found in g)(2)). An alternative form may be used upon approval of the Ohio EPA, District Office or local air agency.

(13) The permit to install (PTI) 15-01553 issued 06/17/2004 for this emissions unit, P904, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Toxic Contaminant: Heptane*

TLV (mg/m3): 1,640

Maximum Hourly Emission Rate (lbs/hr): 4.6

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 6.289

MAGLC (ug/m3): 91,100

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install (or permit-to-install-and-operate PTIO) will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install (or PTIO) prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

d. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

e. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

f. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

* Heptane was used as a surrogate pollutant as it is expected to be greater than any singular or total combined Ohio Toxic Air Contaminant (TAC) or US EPA Hazardous Air Pollutant (HAP).

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA

fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the PTE of any applicable air pollutant and that have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all exceedances of the rolling, 12-month summation production limitation for this emissions unit listed in term c)(3);

ii. all exceedances of the rolling, 12-month summation PM_{10}, SO_2, NOx, VOC and CO emission limitations listed in term b)(1)b.;

iii. all exceedances of the sulfur content limitation for the different fuels and slag listed in terms b)(2)d. through f. and h.;

iv. all exceedances of the organic material content limitation listed in term b)(2)i.;

v. all exceedances of the RAP limitation listed in term c)(4);

vi. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse or the baghouse was not operating when the emissions unit was in operation; and

vii. all exceedances or non-compliance with the fuel/material limitations listed in terms c)(5) and c)(8) and unapproved materials usage prohibition listed in term c)(9);

b. probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September),

unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(4) The permittee shall identify in the annual PER the following information concerning the quality of used oil burned in this emissions unit:

a. any exceedance of the used oil standards in OAC rule 3745-279-11;

b. any occasion where used oil containing 1,000 ppm or more total halogens was burned prior to receiving information demonstrating a successful rebuttal of the presumption that the used oil contains or has been mixed with a listed hazardous waste;

c. any exceedance of the limitations for mercury and/or PCBs; and

d. any deviation from the minimum heat content of 135,000 Btu/gallon.

(5) Where the analytical results for any shipment of used oil burned in this emissions unit establish that the used oil contains total halogens greater than 1,000 ppm, but less than 4,000 ppm, the results of the analysis for total halogens (from the appropriate test Method 9075, 9076, or 9077) and the information obtained to rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste shall be submitted to the appropriate District Office or local air agency. Each rebuttal demonstration shall include:

a. the date the used oil was received;

b. the facility location or identification number where the oil was or will be burned;

c. the amount of oil in the shipment; and

d. all information, including all the analytical results, relied upon by the permittee to rebut the presumption that the used oil contains or has been mixed with a listed hazardous waste.

The rebuttal demonstrations for used oil received from October to December shall be submitted by January 31; used oil received from January to March, by April 30; used oil received from April to June, by July 31; and used oil received from July to September, by October 31.

(6) The permittee shall identify the following information in the annual PER in accordance with the appropriate monitoring requirements in section d) above:

a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;

b. all days during which any visible particulate emissions were observed from any stack serving this emissions unit;

c. all days during which any visible emissions of fugitive dust were observed from any non-stack egress point serving this emissions unit; and

d. any corrective actions taken to minimize or eliminate the occurrences identified in "a" through "c" above.

(7) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Air Toxic Policy", through the predicted 1-hour maximum ground-level concentration, in the annual Permit Evaluation Report (PER). If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

(8) The permittee shall submit a copy of all *Burner Tuning Reporting Form for Asphalt Concrete Plants* forms produced during the past calendar year to the appropriate Ohio EPA District Office or local air agency responsible for the permitting of the facility with the PER.

(9) The information in e)(4) and e)(6)-(8) above shall be provided as an attachment to the PER. If there are no occurrence(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that there are no occurrences of the above to report.

(10) The permittee shall notify Ohio EPA, District Office or local air agency, of any record demonstrating that the hot mix asphalt plant's hourly production level (averaged daily) exceeded 115% of the average hourly production level achieved during the most recent stack test that demonstrated compliance with the applicable emissions limitations. The notification shall be made within three business days after the exceedance occurs.

(11) The permittee shall notify Ohio EPA, District Office or local air agency, of any unscheduled/unplanned fuel switch due to the unexpected interruption of the primary fuel supply. The notification shall be made within three business days after the fuel switch occurs.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitations:</u>

$PE/PM_{10}$from the stack shall not exceed 0.04 gr/dscf and 4.52 tons per rolling, 12-month period, when burning any approved fuel.

Applicable Compliance Method:

The permittee shall determine compliance with the short term emission limitation above in accordance with the testing requirements in f)(2).

Compliance with the annual emission limitation shall be determined by multiplying the recorded emission rate from the most recent emission testing, in pounds of PE/PM_{10} per ton of asphalt produced, by the actual rolling 12 month summation of asphalt produced, in tons per rolling 12-month period, [as derived from the appropriate records required in d)(5)] and dividing by 2000 pounds.

The short term emission limitation was established as a technology based limit equivalent to the limitation within NSPS Subpart I.

The annual emission limitation was administratively modified and established using the short term limit multiplied by the average flow rate of the baghouse (4/28/2003 stack test), and the previous maximum throughput of 300 tons/hr, then converted to a pounds PE/PM_{10} per ton asphalt produced emission factor as shown below:

$$\mathrm{PE/PM_{10}\ EF} = 0.04\frac{\mathrm{gr}}{\mathrm{dscf}}\ \mathrm{x}\ \frac{1\ \mathrm{lb}}{7000\ \mathrm{gr}}\ \mathrm{x}\ 18{,}778\frac{\mathrm{dscf}}{\mathrm{min}}\ \mathrm{x}\ 60\frac{\mathrm{min}}{\mathrm{hr}}\ \mathrm{x}\ \frac{1\ \mathrm{hr}}{300\ \mathrm{tons}}$$
$$= 0.0215\frac{\mathrm{lbs\ PE/PM_{10}}}{\mathrm{ton}}$$

This was then multiplied by the annual production limitation:

$$\mathrm{PE/PM_{10}} = \ 0.0215\frac{\mathrm{lbs\ PE/PM_{10}}}{\mathrm{ton}}\ \mathrm{x}\ 420{,}000\ \frac{\mathrm{tons\ asphalt}}{\mathrm{yr}}\ \mathrm{x}\frac{1\ \mathrm{ton}}{2000\ \mathrm{lbs}}$$
$$= \ 4.52\ \frac{\mathrm{tons\ PE/PM_{10}}}{\mathrm{yr}}$$

b. Emission Limitation:

Visible PE from the stack shall not exceed 20% opacity, as a 3-minute average.

Applicable Compliance Method:

Upon request by the appropriate Ohio EPA District Office or local air agency, opacity of stack emissions shall be determined according to USEPA Method 9 of 40 CFR, Part 60, Appendix A. The permittee shall also comply with the testing requirements in f)(2).

c. Emission Limitation:

CO emissions from the stack shall not exceed 39.00 pounds per hour and 27.30 tons per rolling, 12-month period, when burning any approved fuel.

Applicable Compliance Method:

The permittee shall determine compliance with the short term emission limitation above in accordance with the testing requirements in f)(2).

Compliance with the annual emission limitation shall be determined by multiplying the recorded emission rate from the most recent emission testing (or AP-42 if no emission test data is available for the fuel type), in pounds of CO per ton of asphalt produced, by the actual rolling 12 month summation of asphalt produced, in tons per rolling 12-month period, [as derived from the appropriate records required in term d)(5)] and dividing by 2000 pounds.

The hourly and annual emission limitation while burning any approved fuel was established using an AP-42 Table 11.1-7 (04/2004) emission factor of 0.13 in units of lbs of CO per ton of asphalt produced and multiplying by the previous maximum hourly production rate and annual production limitation as shown below:

$$\mathrm{CO} = 0.13 \frac{\text{lbs CO}}{\text{tonasphalt}} \text{ x } 300 \frac{\text{tons asphalt}}{\text{hr}} = 39.00 \frac{\text{lbs CO}}{\text{hr}}$$

$$\mathrm{CO} = 0.13 \frac{\text{lbs CO}}{\text{ton asphalt}} \text{ x } 420{,}000 \frac{\text{tons asphalt}}{\text{yr}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 27.30 \frac{\text{tons CO}}{\text{yr}}$$

Note: The current maximum hourly production rate was updated in this permit to 340 tons/yr based on stack testing results. The previous maximum hourly production rate of 300 tons/yr was used to establish the emission limitations in the previous permit. Since these limitations are not being administratively modified, the previous calculation method is shown above.

d. Emission Limitation:

NO_X emissions from the stack shall not exceed 45.00 pounds per hour and 31.50 tons per rolling, 12-month period, when burning any approved fuel.

Applicable Compliance Method:

The permittee shall determine compliance with the short term emission limitation above in accordance with the testing requirements in f)(2).

Compliance with the annual emission limitation shall be determined by multiplying the recorded emission rate from the most recent emission testing (or AP-42 if no emission test data is available for the fuel type), in pounds of NO_x per ton of asphalt produced, by the actual rolling 12 month summation of asphalt produced, in tons per rolling 12-month period, [as derived from the appropriate records required in d)(5)] and dividing by 2000 pounds.

The hourly and annual emission limitation while burning any approved fuel was established using a production based emission factor of 0.15 in units of lbs of NO_X per ton of asphalt produced. This emission factor was established by

adjusting the October 2003 stack test results average by the test production rate average as shown below:

$$\mathrm{NO_X EF} = 44.80\ \frac{\text{lbs NO}_X}{\text{hr}}\ \text{x}\ \frac{1\ \text{hr}}{296.67\ \text{tons}} = 0.15\ \frac{\text{lbs NO}_X}{\text{ton asphalt}}$$

This was then multiplied by the previous maximum hourly production rate and the annual production limitation as shown below:

$$\mathrm{NO_X} = 0.15\ \frac{\text{lbs NO}_X}{\text{ton asphalt}}\ \text{x}\ 300\ \frac{\text{tons asphalt}}{\text{hr}} = 45.00\ \frac{\text{ton NO}_X}{\text{hr}}$$

$$\mathrm{NO_X} = 0.15\ \frac{\text{lbs NO}_X}{\text{ton asphalt}}\ \text{x}\ 420{,}000\ \frac{\text{tons asphalt}}{\text{yr}}\ \text{x}\ \frac{1\ \text{ton}}{2000\ \text{lbs}} = 31.50\ \frac{\text{ton NO}_X}{\text{yr}}$$

Note: The current maximum hourly production rate was updated in this permit to 340 tons/yr based on stack testing results. The previous maximum hourly production rate of 300 tons/yr was used to establish the emission limitations in the previous permit. Since these limitations are not being administratively modified, the previous calculation method is shown above.

e. <u>Emission Limitation:</u>

From the stack:

SO_2 emissions shall not exceed 1.16 pounds per hour, when burning natural gas as fuel;

SO_2 emissions shall not exceed 28.50 pounds per hour when burning natural gas while processing slag;

SO_2 emissions shall not exceed and 17.40 pounds per hour when burning #2 fuel oil, #4 fuel oil, or on-spec used oil;

SO2 emissions shall not exceed 35.6 pounds per hour, when burning #2 fuel oil, #4 fuel oil, or on-spec used oil while processing slag; and

SO_2 emissions shall not exceed 24.92 tons per rolling, 12-month period.

<u>Applicable Compliance Method:</u>

The permittee shall determine compliance with the short term emission limitations above in accordance with the testing requirements in f)(2).

Compliance with the annual emission limitation shall be determined by multiplying the recorded emission rate from the most recent emission testing (or AP-42 if no emission test data is available for the fuel type), in pounds of SO_2 per ton of asphalt produced, by the actual rolling 12 month summation of asphalt produced, in tons per rolling 12-month period, [as derived from the appropriate records required in d)(5)] and dividing by 2000 pounds.

The hourly emission limitation when burning natural gas was administratively modified and established using AP-42 Table 11.1-7 (04/2004) emission factors of 0.0034 in units of lbs of SO_2 per ton of asphalt produced and multiplying by the current maximum hourly production rate as shown below:

$$SO_2 = 0.0034 \frac{\text{lbs } SO_2}{\text{tonasphalt}} \text{ x } 340 \frac{\text{tons asphalt}}{\text{hr}} = 1.16 \frac{\text{lbs } SO_2}{\text{hr}}$$

The hourly emission limitation when burning natural gas while processing slag was established using a production based emission factor of 0.095 in units of lbs of SO_2 per ton of asphalt produced. This emission factor was established by adjusting the April 2003 stack test results average by the test production rate average as shown below:

$$SO_2 \text{ EF} = 28.17 \frac{\text{lbs } SO_2}{\text{hr}} \text{ x } \frac{1 \text{ hr}}{295.33 \text{ tons}} = 0.095 \frac{\text{lbs } SO_2}{\text{ton asphalt}}$$

This was then multiplied by the previous maximum hourly production rate as shown below:

$$SO_2 = 0.095 \frac{\text{lbs } SO_2}{\text{ton asphalt}} \text{ x } 300 \frac{\text{tons asphalt}}{\text{hr}} = 28.50 \frac{\text{lbs } SO_2}{\text{hr}}$$

The hourly emission limitation when burning #2 fuel oil, #4 fuel oil, or on-spec used fuel oil was established using AP-42 Table 11.1-7 (04/2004) emission factor of 0.058 in units of lbs of SO_2 per ton of asphalt produced and multiplying by the previous maximum hourly production rate as shown below:

$$SO_2 = 0.058 \frac{\text{lbs } SO_2}{\text{tonasphalt}} \text{ x } 300 \frac{\text{tons asphalt}}{\text{hr}} = 17.40 \frac{\text{lbs SO2}}{\text{hr}}$$

The hourly and annual emission limitation when burning #2 fuel oil, #4 fuel oil, or on-spec used oil while processing slag were established to avoid exceeding the Ohio Modeling Significant Emission Rate Threshold of 25 tons SO_2 per year, as shown below:

$$SO_2 \text{ EF} = 24.9 \frac{\text{tons } SO_2}{\text{yr}} \text{ x } \frac{2000 \text{ lbs}}{1 \text{ ton}} \text{ x } \frac{\text{yr}}{420{,}000 \text{ tons asphalt}} \text{ x } 300 \frac{\text{tons asphalt}}{\text{hr}}$$
$$= 35.6 \frac{\text{lbs } SO_2}{\text{hr}}$$

This was then multiplied by the annual production limitation as shown below:

$$SO_2 = 35.6 \frac{\text{lbs } SO_2}{\text{hr}} \text{ x } \frac{\text{hr}}{300 \text{ tons}} \text{x } 420{,}000 \frac{\text{tons asphalt}}{\text{yr}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 24.92 \frac{\text{ton } SO_2}{\text{yr}}$$

Note: The current maximum hourly production rate was updated in this permit to 340 tons/yr based on stack testing results. The previous maximum hourly production rate of 300 tons/yr was used to establish the emission limitations in

the previous permit. Those limitations that are not being administratively modified show the previous calculation method above.

f. Emission Limitation:

From the stack:

VOC emissions shall not exceed 27.89 pounds per hour when burning natural gas;

VOC emissions from the stack shall not exceed 36.48 pounds per hour when burning #2 fuel oil, #4 fuel oil, or on-spec used oil; and

VOC emissions shall not exceed 23.52 tons per rolling, 12-month period.

Applicable Compliance Method:

The permittee shall determine compliance with the short term emission limitation above in accordance with the testing requirements in f)(2).

Compliance with the annual emission limitation shall be determined by multiplying the recorded emission rate from the most recent emissions testing (or AP-42 if no emission test data is available for the fuel type), in pounds of VOC per ton of asphalt produced, by the actual rolling 12 month summation of asphalt produced, in tons per rolling 12-month period, [as derived from the appropriate records required in term d)(5)] and dividing by 2000 pounds.

The hourly emission limitation when burning natural gas was established by adding 15% for error to the previous stack test results for this emissions unit conducted in April 2003 as shown below:

$$\text{VOC} = 24.25\ \frac{\text{lbs VOC}}{\text{hr}}\ \text{x}\ 1.15 = 27.89\ \frac{\text{lbs VOC}}{\text{hr}}$$

The hourly emission limitation when burning #2 fuel oil, #4 fuel oil, or on-spec used oil was administratively modified and established by adding 15% for error to the previous stack test results for this emissions unit conducted in August 2006 as shown below:

$$\text{VOC} = 31.72\ \frac{\text{lbs VOC}}{\text{hr}}\ \text{x}\ 1.15 = 36.48\ \frac{\text{lbs VOC}}{\text{hr}}$$

The annual emission limitation was administratively modified and established using a production based emission factor based on the #2 fuel oil, #4 fuel oil, or on-spec used oil hourly limit, which has the highest allowable hourly rate, and the average production rate from the previous stack test results for this emissions unit conducted in August 2006, as shown below:

$$\text{VOC EF} = 36.48\ \frac{\text{lbs VOC}}{\text{hr}}\ \text{x}\ \frac{1\ \text{hr}}{325\ \text{tons}} = 0.112\ \frac{\text{lbs VOC}}{\text{ton asphalt}}$$

This is then multiplied by the annual production limitation and divided by 2000 pounds per ton, as shown below:

$$\text{VOC} = 0.112\frac{\text{lbs VOC}}{\text{ton asphalt}} \text{ x } 420{,}000\frac{\text{tons asphalt}}{\text{yr}} \text{ x } \frac{1\text{ ton}}{2000\text{ lbs}} = 23.52\frac{\text{ton VOC}}{\text{yr}}$$

Note: The current maximum hourly production rate was updated in this permit to 340 tons/yr based on stack testing results. The previous maximum hourly production rate of 300 tons/yr was used to establish the emission limitations in the previous permit. Those limitations that are not being administratively modified show the previous calculation method above.

g. Emissions Limitations:

Fugitive emissions from asphalt load out operations:

PM_{10} emissions shall not exceed 0.11 ton per rolling, 12-month period;

VOC emissions shall not exceed 0.81 ton per rolling, 12-month period; and

CO emissions shall not exceed 0.28 ton per rolling, 12-month period.

Fugitive emissions from asphalt silo filling operations:

PM_{10} emissions shall not exceed 0.12 ton per rolling, 12-month period;

VOC emissions shall not exceed 2.52 tons per rolling, 12-month period; and

CO emissions shall not exceed 0.25 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be assumed based upon the following worst case calculations, which were used to administratively modify and establish the emission limitations:

Fugitive emissions from the hot end (hot mix asphalt (HMA) load-out and silo filling) are calculated as follows from AP-42, Table 11.1-14 (3/2004):

Activity	Pollutant	Predictive Emission Factor Equation, lb/ton
Silo filling	PE/PM_{10}	$EF=0.000332+0.00105(-V)e^{((0.0251)(T+460)-20.43)}$
Load-out	PE/PM_{10}	$EF=0.000181+0.00141(-V)e^{((0.0251)(T+460)-20.43)}$
Silo filling	VOC	$EF= [0.0504(-V)e^{((0.0251)(T+460)-20.43)}] \text{ x } (1-0.014)$
Load-out	VOC	$EF= [0.0172(-V)e^{((0.0251)(T+460)-20.43)}] \text{ x } (1-0.073)$
Silo filling	CO	$EF=0.00488(-V)e^{((0.0251)(T+460)-20.43)}$
Load-out	CO	$EF=0.00558(-V)e^{((0.0251)(T+460)-20.43)}$

Where:

V = -0.5 and T = 325°F as default.

For silo filling, 1.4 percent of TOC is not VOC (AP-42 Table 11.1-16 (3/2004))

For plant load-out, 7.3 percent of TOC is not VOC (AP-42 Table 11.1-16 (3/2004))

Based on the above information, the emission factors and emissions for 420,000 tons asphalt/yr are as follows:

Activity	Pollutant	EF (lbs/ton)	Annual Limit (tons/yr)
Silo filling	PE/PM_{10}	5.86×10^{-4}	0.12
Load-out	PE/PM_{10}	5.22×10^{-4}	0.11
Silo filling	VOC	1.20×10^{-2}	2.52
Load-out	VOC	3.86×10^{-3}	0.81
Silo filling	CO	1.18×10^{-3}	0.25
Load-out	CO	1.35×10^{-3}	0.28

h. Emissions Limitation:

Fugitive PM_{10} emissions from cold end operations (cold aggregate, sand, and RAP loading and transfer operations) shall not exceed 1.36 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be assumed based upon the following worst case calculations, which were used to administratively modify and establish the emission limitations:

Fugitive emissions from the cold end are calculated as follows from AP-42, Table 11.12-2 (6/2006):

Hopper loading:

$$420{,}000 \frac{\text{tons raw material}}{\text{yr}} \text{ x } 0.0028 \frac{\text{lb PM}_{10}}{\text{ton raw material}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.59 \frac{\text{tons PM}_{10}}{\text{yr}}$$

Aggregate transfer:

$$420{,}000 \frac{\text{tons aggregate}}{\text{yr}} \text{ x } 0.0033 \frac{\text{lb PM}_{10}}{\text{ton aggregate}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.69 \frac{\text{tons PM}_{10}}{\text{yr}}$$

Sand transfer:

$$168{,}000 \frac{\text{tons sand}}{\text{yr}} \text{ x } 0.00099 \frac{\text{lb PM}_{10}}{\text{ton sand}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.08 \frac{\text{tons PM}_{10}}{\text{yr}}$$

The sum of the above is:

$$0.59 \frac{\text{tons PM}_{10}}{\text{yr}} + 0.69 \frac{\text{tons PM}_{10}}{\text{yr}} + 0.08 \frac{\text{tons PM}_{10}}{\text{yr}} = 1.36 \frac{\text{tons PM}_{10}}{\text{yr}}$$

i. Emissions Limitation:

Fugitive PE emissions shall not exceed 4.74 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emissions limitation shall be assumed based upon the following worst case calculations, which were used to administratively modify and establish the emission limitations:

The emission limitation is the summation of annual fugitive PE emissions from silo loading and load-out (hot end), demonstrated in f)(1)g. above and annual emissions from the cold end, shown below:

Fugitive emissions from the cold end are calculated as follows from AP-42, Table 11.12-2 (6/2006):

Hopper loading:

$$420{,}000\ \frac{\text{tons raw material}}{\text{yr}}\ \text{x}\ 0.0051\ \frac{\text{lb PE}}{\text{ton raw material}}\ \text{x}\ \frac{1\ \text{ton}}{2000\ \text{lbs}} = 1.07\ \frac{\text{tons PE}}{\text{yr}}$$

Aggregate transfer:

$$420{,}000\ \frac{\text{tons aggregate}}{\text{yr}}\ \text{x}\ 0.0069\ \frac{\text{lb PE}}{\text{ton aggregate}}\ \text{x}\ \frac{1\ \text{ton}}{2000\ \text{lbs}} = 1.45\ \frac{\text{tons PE}}{\text{yr}}$$

Sand transfer:

$$168{,}000\ \frac{\text{tons sand}}{\text{yr}}\ \text{x}\ 0.0021\ \frac{\text{lb PE}}{\text{ton sand}}\ \text{x}\ \frac{1\ \text{ton}}{2000\ \text{lbs}} = 0.18\ \frac{\text{tons PE}}{\text{yr}}$$

The sum of the above is:

$$1.07\ \frac{\text{tons PE}}{\text{yr}} + 1.45\ \frac{\text{tons PE}}{\text{yr}} + 0.18\ \frac{\text{tons PE}}{\text{yr}} = 2.70\frac{\text{tons PE}}{\text{yr}}$$

Total annual fugitive PE:

$$\text{PE} = 0.11\frac{\text{tons PE}}{\text{yr}} + 0.12\frac{\text{tons PE}}{\text{yr}} + 2.70\frac{\text{tons PE}}{\text{yr}} = 2.93\frac{\text{tons PE}}{\text{yr}}$$

The hourly limitation was calculated as a worst case scenario of the total annual fugitive PE, converted to pounds per year, divided by the maximum annual production and multiplied by the current maximum hourly production, as shown below:

Hourly fugitive PE:

$$\text{PE} = 2.93\frac{\text{tons PE}}{\text{yr}} \text{ x } \frac{2000 \text{ lbs}}{\text{ton}} \text{ x } \frac{\text{yr}}{420000 \text{ tons asphalt}} \text{ x } \frac{340 \text{ tons asphalt}}{\text{hr}}$$
$$= 4.74\frac{\text{lbs PE}}{\text{hr}}$$

j. Emissions Limitation:

Fugitive PM_{10} shall not exceed 2.57 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emissions limitation shall be assumed based upon compliance with the annual fugitive PM_{10} emission limitations demonstrated in f)(1)g. and f)(1)h. above. The hourly limitation was administratively modified and established based on the a calculated a worst case scenario of the total annual fugitive PM_{10}, converted to pounds per year, divided by the maximum annual production and multiplied by the current maximum hourly production as shown below:

Total annual fugitive PM_{10}:

$$\text{PM}_{10} = 0.11\frac{\text{tons PM}_{10}}{\text{yr}} + 0.12\frac{\text{tons PM}_{10}}{\text{yr}} + 1.36\frac{\text{tons PM}_{10}}{\text{yr}} = 1.59\frac{\text{tons PM}_{10}}{\text{yr}}$$

Hourly fugitive PE:

$$\text{PM}_{10} = 1.59\frac{\text{tons PM}_{10}}{\text{yr}} \text{ x } \frac{2000 \text{ lbs}}{\text{ton}} \text{ x } \frac{\text{yr}}{420000 \text{ tons asphalt}} \text{ x } \frac{340 \text{ tons asphalt}}{\text{hr}}$$
$$= 2.57\frac{\text{lbs PM}_{10}}{\text{hr}}$$

k. Emission Limitation:

There shall be no visible emissions of fugitive dust from the enclosures for the rotary drum and the hot mix asphalt elevator.

Applicable Compliance Method:

Compliance shall be demonstrated by the monitoring and record keeping in term d)(8) above. Upon request by the Ohio EPA District Office or local air agency, compliance shall be determined according to USEPA Method 22 of 40 CFR Part 60, Appendix A, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03. The permittee shall also comply with the testing requirements in f)(2).

l. Emission Limitation:

Visible emissions of fugitive dust (from areas other than the enclosures for the rotary drum and the hot mix asphalt elevator) shall be less than or equal to 10% opacity, as a 3-minute average.

Applicable Compliance Method:

Upon request by the Ohio EPA District Office or local air agency, compliance shall be determined according to USEPA Method 9 of 40 CFR, Part 60, Appendix A, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03. The permittee shall also comply with the testing requirements in f)(2).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The testing shall be conducted and completed, after final issuance of this permit, during (but no later than the end of) the 2016 production season, to demonstrate compliance with the stack emission limitations established pursuant to OAC rule 3745-31-05(A)(3), and from 40 CFR Part 60 Subpart I, Section 60.92(a), as specified in f)(1)a., b., c., d., e., and f. above and the fugitive opacity limitations as specified in f)(1)i. and k. above. The particulate matter emission testing shall be conducted in accordance with the provisions of 40 CFR Part 60, Subpart I, Section 60.93.

For purposes of this permit, the production season is defined as the time period between the date the first ton of asphalt is produced and the date that the last ton of asphalt is produced during the same calendar year.

In addition, testing shall be conducted as required by c)(10), if necessary.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for visible emissions (opacity), PE/PM_{10}, VOC, CO, NO_x and SO_2 for the primary fuel, while employing RAP and/or slag, if applicable. If emission testing is necessary as required in c)(10), testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PE/PM_{10},CO, and NO_X, while not employing slag or PE/PM_{10},CO, NO_X, and SO_2,while employing slag, if applicable.

When a scheduled/planned fuel switch occurs, emission testing shall be conducted within 60 days after the switch to the secondary fuel. Prior to secondary fuel use emission testing, the permittee shall consult the Ohio EPA, District Office or local air agency to determine which pollutants should be tested.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s) for:

PE, Methods 1-5 of 40 CFR Part 60, Appendix A

Visible Emissions (Opacity), Method 9 of 40 CFR Part 60, Appendix A

NO_x, Methods 1-4 and 7 or 7E of 40 CFR Part 60, Appendix A

SO_2, Methods 1-4 and 6 or 6C of 40 CFR Part 60, Appendix A

CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A

VOC, Methods 1-4 and 18, 25 or 25A, as applicable, of 40 CFR Part 60, Appendix A

The VOC pounds per hour emission rate observed during the emission test shall be calculated in accordance with OAC rule 3745-21-10(C)(7). In lieu of this, the permittee shall convert the mass emission value from VOC as carbon to VOC using the molecular weight of propane, i.e., the VOC as carbon emission rate observed during testing shall be converted to the appropriate units by multiplying the VOC emission rate observed during testing (in lbs/hr) by 44 (propane) and dividing by 36 (3 atoms of carbon).

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. During the emissions testing, the emissions unit shall be operated under operational conditions approved in advance by the appropriate Ohio EPA District Office or local air agency. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under “worst case” conditions expected during the life of the permit. As part of the information provided in the “Intent to Test” notification form described below, the permittee shall provide a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe “worst case” operating conditions will be met. Prior to conducting the test(s), the permittee shall confirm with the appropriate Ohio EPA District Office or local air agency that the proposed operating conditions constitute “worst case”. Failure to test under the approved conditions may result in the appropriate Ohio EPA District Office or local air agency not accepting the test results as a demonstration of compliance.

e. Monitoring and recording of the pressure drop of the baghouse shall be conducted at 15 minute intervals during the duration of the test(s). Hourly averages of the readings shall be used to establish and/or re-verify the pressure drop range specified in term d)(3).

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the appropriate Ohio EPA District Office or local air agency's refusal to accept the results of the emission test(s).

g. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

h. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

(3) Burner Evaluation/Tuning

a. Introduction

The permittee is required to conduct periodic evaluation/tuning of the asphalt plant burner as set forth below. The purpose of this evaluation/tuning is to ensure that the burner is adjusted and maintained in order to make the burner as fuel efficient as possible.

b. Qualifications for Burner Evaluation/Tuning

Technicians who conduct the burner evaluation/tuning must be qualified to perform the expected burner evaluation/tuning tasks. In order to be qualified, the technician must have passed manufacturer's training concerning burner evaluation/tuning, or must have been trained by someone who has completed the manufacturer's training concerning burner evaluation/tuning. Burner evaluation/tuning technicians can be either permittee employees or outside parties.

c. Portable Monitor Requirements

Portable monitors used for burner evaluation/tuning shall be properly operated and maintained to monitor the concentration of NO_x, O_2 and CO in the stack exhaust gases from this emissions unit. The monitor(s) shall be capable of measuring the expected concentrations of the measured gases. The monitoring equipment shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The owner or operator of the portable monitor shall maintain records of each portable monitoring device's calibration.

d. Burner Evaluation/Tuning Procedure

An alternative form may be used as long as it contains the same data elements as the Burner Evaluation/Tuning Reporting Form for Asphalt Concrete Plants form.

The burner shall be evaluated and, if necessary, tuned based on the frequency described in f)(3)e.

The general procedure for evaluating and, if necessary, tuning the burner involves the following steps:

i. Review the plant operations to ensure the plant is operating normally based on weather conditions and production.

ii. Confirm that the portable monitor is calibrated per the manufacturer's specifications.

iii. Using the calibrated monitor and the monitor manufacturer's recommended sampling duration, measure the stack exhaust gas values for NO_x, O_2, and CO. These measurements shall be taken at a location representative of stack emissions. Record the values in the "Pre-Tuning" results column on the Burner Tuning Reporting Form for Asphalt Concrete Plants form (as found in g)). An alternative form may be used as long as it contains the same data elements as the Burner Evaluation/Tuning Reporting Form for Asphalt Concrete Plants form.

iv. Make any necessary adjustments and repairs to the burner in order to make the burner as fuel efficient as possible.

v. If adjustments or repairs are made to the burner, then the technician shall re-measure the stack exhaust gas values for NO_x, O_2, and CO. This procedure shall be repeated until the technician is satisfied that the burner has been appropriately tuned. Once he/she is satisfied, then the technician shall record the post tune NO_x, O_2, and CO values in the "Post Tuning" results column on the Burner Tuning Reporting Form for Asphalt Concrete Plants (or equivalent) form.

Note that the Ohio EPA reserves the right to require permittees to conduct additional emissions tests to verify compliance. Operators who choose not to keep their burners in tune are more likely to be required by Ohio EPA to conduct additional emissions tests to verify compliance. Therefore, it is recommended that permittees make necessary adjustments and repairs to burners as soon as possible and verify that the burner is operating as designed.

vi. Submit a copy of all Burner Evaluation/Tuning Reporting Form(s) for Asphalt Concrete Plants forms produced during the past calendar year to the appropriate Ohio EPA District Office or local air agency responsible for the permitting of the facility with the PER. Note: These forms are required to be submitted even if the burner is not actually adjusted.

e. Burner Tuning Frequency

The permittee shall conduct the burner evaluation/tuning procedure within 30 production days after commencement of the production season in the State of

Ohio. The permittee shall conduct another burner evaluation/tuning procedure within 15 production days before or after June 1st of each year and within 15 production days before or after September 1st of each year. For purposes of this permit, the production season is defined as the time period between the date the first ton of asphalt is produced and the date that the last ton of asphalt is produced during the same calendar year. A burner evaluation/tuning is not required if the production season ends prior to the associated evaluation/tuning due date. If the initial season evaluation/tuning is conducted within 30 days prior to June 1 or September 1, the tuning associated with that due date is not required.

In addition to the burner evaluation/tuning procedure required above, the permittee shall conduct the burner evaluation/tuning procedure within 20 production days from the date the facility switches to a fuel that is different than the fuel burned during the most recent burner evaluation/tuning procedure.

(4) Used Oil Analyses

The concentrations of contaminants (arsenic, cadmium, chromium, lead, mercury, PCBs, and total halogens) in the used oil shall be analyzed using a “total constituent analysis” method, as specified in U.S. EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." The applicable test methods that should be used are as follows:

Arsenic, cadmium, chromium, and lead: SW-846, Method 3031 or 3051 (digestion procedures) followed by analysis using Method 6010B or 6020;

Mercury: SW-846, Method 7471A;

PCBs: SW-846, Method 8270C or 8082; and

Total halogens: SW-846, Method 9075, 9076, or 9077.

The permittee shall submit a written request and receive approval from Ohio EPA Division of Hazardous Waste Management and/or the Division of Air Pollution Control, of Central Office, before an alternative test method, not listed above, can be used for the total constituent analysis of the above-mentioned used oil contaminants.

g) Miscellaneous Requirements

(1) The following source is subject to the applicable provision of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

Source Number	Source Description	NSPS Regulation (Subpart)
P904	340 TPH - Drum HMA Plant	Subpart I

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

a. Construction date (no later than 30 days after such date);

b. Actual start-up date (within 15 days after such date); and

c. Date of performance testing (If required, at least 30 days prior to testing).

Reports are to be sent to the appropriate Ohio EPA District Office or local air agency responsible for the permitting of the facility.

(2) Burner Tuning Form (See next page)

2. P902, Asphalt Batch Plant with Cyclone & Scrubber

Operations, Property and/or Equipment Description:

Batch hot mix asphalt (HMA) plant. Maximum production capacity 125 tons per hour. The aggregate dryer, rated heat input capacity of 69 million Btu per hour, burns natural gas only. The aggregate mix includes limestone, sand and gravel. Agricultural lime added to the raw ingredient mix. Particulate matter emissions controlled by a cyclone and wet scrubber.

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)f., b)(2)b. through d., c)(1) through (4), d)(4), e)(2)(a)i. and ii.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) from the stack shall not exceed 20% opacity, as a 6-minute average. See b)(2)d.
b.	OAC rule 3745-17-07(B)	Visible PE from fugitive dust (from areas other than the enclosures for the hot aggregate elevator, vibrating screens, weigh hopper, and rotary dryer) shall not exceed 20% opacity, as a 3-minute average.
c.	OAC rule 3745-17-08(B) [Reasonably Available Control Measures (RACM)]	The aggregate loaded into the storage bins shall have a moisture content sufficient to minimize or eliminate the

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		visible fugitive particulate emissions from conveyors and all transfer points to the dryer. The drop height of the front end loader bucket shall be minimized to the extent possible in order to minimize or eliminate visible particulate emissions of fugitive dust from the aggregate storage bins.
d.	OAC rule 3745-17-11(B)(1)	PE from the stack shall not exceed 53.55 pounds per hour. This emission limitation is less stringent than the emission limitation pursuant to OAC rule 3745-31-05(D).
e.	OAC rule 3745-18-06(E)	Sulfur dioxide (SO_2) from the stack shall not exceed 508.11 pounds per hour. This emission limitation is less stringent than the emission limitation pursuant to OAC rule 3745-31-05(D).
f.	OAC rule 3745-31-05(D) [Synthetic minor to avoid Title V]	<u>Stack Emissions</u> PE/PM_{10} shall not exceed 13.23 pounds per hour and 11.70 tons per rolling 12-month period. VOC emissions shall not exceed 0.82 tons per rolling 12-month period. SO_2 emissions shall not exceed 0.58 pounds per hour and 0.46 tons per rolling 12-month period. NO_x emissions shall not exceed 2.50 tons per rolling 12-month period. CO emissions shall not exceed 40.00 tons per rolling 12-month period. <u>Fugitive Emissions</u> Fugitive emissions from Asphalt Load Out Operations: PM_{10} shall not exceed 0.05 ton per rolling

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		12-month period. VOC emissions shall not exceed 0.39 ton per rolling 12-month period. CO emissions shall not exceed 0.13 ton per rolling 12-month period. Fugitive emissions from Cold End Operations (cold aggregate, sand, and lime loading & transfer operations,): PM_{10} shall not exceed 1.28 tons per rolling 12-month period See b)(2)b. through d., and c)(1) through (4)

(2) Additional Terms and Conditions

a. The permittee shall apply for and, if required, obtain a modification to this permit or obtain a new final federally enforceable permit-to-install and operate (FEPTIO) prior to making any change to equipment, change in fuels burned, change in the method of operation, or any other change to this emissions unit that results in an increase in the allowable emissions or results in an increase in emissions of greater than the de minimis levels in OAC rule 3745-15-05 for any type of air contaminant not previously emitted.

b. The permittee shall properly install (or have properly installed), adjust, operate, and maintain a cyclone and wet scrubber to serve this emissions unit, including enclosures, ductwork, fans, and any other equipment necessary to capture, contain, and vent particulate emissions to the cyclone and wet scrubber serving this emissions unit, in accordance with the manufacturer's recommendations, instructions, and operating manuals, and to the extent possible with good engineering design.

c. The process emissions from this emissions unit shall be vented to the cyclone and wet scrubber at all times the emissions unit is in operation.

d. The presence of water vapor in the scrubber plume does not constitute visible emissions.

c) Operational Restrictions

(1) The permittee shall employ the cyclone and wet scrubber serving this emissions unit at all times the emissions unit is in operation.

(2) The permittee has requested a federally enforceable limitation on asphalt produced in order to restrict the federally enforceable potential to emit. Annual asphalt production from emissions unit P902, shall not exceed 200,000 tons per year, based upon a rolling, 12-month summation of the monthly production rates. The permittee has existing asphalt production records such that first year monthly asphalt production limitations are not required.

(3) The permittee shall only burn natural gas in this emissions unit.

(4) The permittee shall only use virgin aggregate, liquid asphalt, and agricultural lime in the raw material feed mix in amounts not to exceed those amounts specified in the application.

(5) No unapproved materials shall be used in the raw material feed mix without prior written notification to and written approval from Ohio EPA or Local air agency.

(6) The permittee shall restrict the hourly production level (averaged daily) for this emissions unit to 115% or less of the average hourly production level achieved during the most recent stack test that demonstrated compliance with the applicable emissions limitations. [During the most recent stack tests that demonstrated compliance with the applicable emissions limitations, the average hourly production level achieved was 113 tons per hour (July 7, 2009).]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall document when the cyclone and wet scrubber serving this emissions unit was not in service when the emissions unit was in operation.

(2) In order to maintain compliance with the applicable PE emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the wet scrubber is between 4.0 to 8.0 inches of water, based upon the 9/9/2014 facility profile.

(3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the wet scrubber when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The permittee shall record the pressure drop across the wet scrubber on a daily basis.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the pressure drop readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The permitted range or limit on the pressure drop across the wet scrubber is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrates compliance with the allowable PE emissions rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(4) The permittee shall maintain monthly records of the following information:

a. the total asphalt production, in tons for each month;

b. the rolling, 12-month summation of the total asphalt production, calculated by adding the current month's asphalt production to the asphalt production for the preceding eleven calendar months;

c. the rolling, 12-month summation of the PM_{10}, SO_2, NO_x, VOC and CO emissions; and

d. the tons of aggregate, natural sand, and lime used for each ton of asphalt produced.

(5) The permittee shall maintain daily records of the following information:

a. the asphalt production, in tons for each day;

b. the operating hours of the batch HMA plant for each day; and

c. the average operating rate, in tons per hour.

(6) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for: (1) any visible particulate emissions from the stack serving this emissions unit; and (2) any visible emissions of fugitive dust (from areas other than the enclosures for the rotary drum, the hot aggregate elevator, the hot screens, and the weigh hopper) from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission event; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission event has occurred. The observer does not have to document the exact start and end times for the visible emission event under item d above or continue the daily check until the event has ended. The observer may indicate that the visible emission event was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

(7) The permittee shall perform daily visible emission checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the enclosures for the rotary drum, the hot aggregate elevator, the hot screens, and the weigh hopper serving this emissions unit. If visible emissions are observed, the permittee shall note the following in the operation log:

a. the location and color of the visible emissions;

b. the cause of the visible particulate emissions;

c. the total duration of any visible emissions incident; and

d. any corrective actions taken to eliminate the visible emissions.

(8) The permittee shall perform burner tuning in accordance with term f)(3) below. While performing each burner tuning, the permittee shall record the results of the burner tuning using the *Burner Tuning Reporting Form for Asphalt Concrete Plants* form (as found in g)(1)). An alternative form may be used upon approval of the Ohio EPA, District Office or local air agency.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the PTE of any applicable air pollutant and that have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all exceedances of the rolling, 12-month summation production limitation for this emissions unit listed in term c)(2);

ii. all exceedances of the rolling, 12-month summation PM_{10}, SO_2, NOx, VOC and CO emission limitations listed in term b)(1)f.;

iii. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the cyclone and wet scrubber or the cyclone and wet scrubber were not operating when the emissions unit was in operation; and

iv. all exceedances or non-compliance with the fuel/material limitations listed in terms c)(3) and c)(4) and unapproved materials usage prohibition listed in term c)(5);

b. probable cause of each deviation (excursion);

c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and

d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(4) The permittee shall identify the following information in the annual PER in accordance with the appropriate monitoring requirements in section d) above:

a. each period of time (start time and date, and end time and date) when the pressure drop across the wet scrubber was outside of the acceptable range;

b. all days during which any visible particulate emissions were observed from any stack serving this emissions unit;

c. all days during which any visible emissions of fugitive dust were observed from any non-stack egress point serving this emissions unit; and

d. any corrective actions taken to minimize or eliminate the occurrences identified in “a” through “c” above.

(5) The permittee shall submit a copy of all *Burner Tuning Reporting Form for Asphalt Concrete Plants* forms produced during the past calendar year to the appropriate Ohio EPA District Office or local air agency responsible for the permitting of the facility with the PER.

(6) The information in e)(4) and e)(5) above shall be provided as an attachment to the PER. If there are no occurrence(s) to identify as required above, the permittee shall indicate within the “Additional Information and Corrections” section of the PER that there are no occurrences of the above to report.

(7) The permittee shall notify Ohio EPA, District Office or local air agency, of any record demonstrating that the hot mix asphalt plant’s hourly production level (averaged daily) exceeded 115% of the average hourly production level achieved during the most recent stack test that demonstrated compliance with the applicable emissions limitations. The notification shall be made within three business days after the exceedance occurs.

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible PE from the stack shall not exceed 20% opacity, as a 6-minute average.

Applicable Compliance Method:

Upon request by the appropriate Ohio EPA District Office or local air agency, opacity of stack emissions shall be determined according to USEPA Method 9 of 40 CFR, Part 60, Appendix A. The permittee shall also comply with the testing requirements in f)(2).

b. Emission Limitation:

Visible PE from fugitive dust (from areas other than the enclosures for the hot aggregate elevator, vibrating screens, weigh hopper, and rotary dryer) shall not exceed 20% opacity, as a 3-minute average.

Applicable Compliance Method:

Upon request by the Ohio EPA District Office or local air agency, compliance shall be determined according to USEPA Method 9 of 40 CFR, Part 60, Appendix A, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03. The permittee shall also comply with the testing requirements in f)(2).

c. Emission Limitations:

PE from the stack shall not exceed 53.55 pounds per hour.

Applicable Compliance Method:

The permittee shall determine compliance with the short term emission limitation above in accordance with the testing requirements in f)(2).

The permittee shall comply with the more restrictive requirement of either Table 1 or Figure II of OAC rule 3745-17-11. Therefore, the allowable particulate emission limitation was determined from Table 1, which is more stringent than value from Figure II. Table 1 provides the following equation:

$$E = 55.0 \times (P^{0.11}) - 40$$

Where,

P = process weight rate, in tons/hr, of materials that contribute to particulate emissions (excludes gaseous fuels), which is equal to 125

E = maximum allowable particulate emission rate

The calculation results: $E = 55.0 \times (125^{0.11}) - 40$ = 53.55 lbs/hr

If requested, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC Rule 3745-17-03(B)(10).

d. Emission Limitations:

$SO_2$from the stack shall not exceed 508.11 pounds per hour.

Applicable Compliance Method:

The permittee shall determine compliance with the short term emission limitation above in accordance with the testing requirements in f)(2).

The permittee shall comply with the allowable emission rate (AER) calculated from the equation in OAC rule 3745-18-06 as shown below:

$$AER = 20 \times (P^{0.67})$$

Where,

P = process weight rate, in tons/hr, of materials that contribute to SO_2 emissions (excludes gaseous fuels), which is equal to 125

The calculation results: $AER = 20 \times (125^{0.67})$ = 508.11 lbs/hr

If requested, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6.

e. Emission Limitations:

PE/$PM_{10}$from the stack shall not exceed 13.23 pounds per hour and 11.70 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined by multiplying the recorded emission rate from the most recent emission testing, in pounds of PE/PM_{10} per ton of asphalt produced, by the actual rolling 12 month summation of asphalt produced, in tons per rolling 12-month period, [as derived from the appropriate records required in d)(4)] and dividing by 2000 pounds.

The hourly emission limitation was established by adding 15% for error to the previous stack test results for PE for this emissions unit conducted in July 2009 as shown below:

$$\mathrm{PE/PM_{10}} = 11.50\ \frac{\mathrm{lbs\ PE/PM_{10}}}{\mathrm{hr}}\ \mathrm{x}\ 1.15 = 13.23\ \frac{\mathrm{lbs\ PE/PM_{10}}}{\mathrm{hr}}$$

The annual emission limitation was established using a PE/ PM_{10} production based emission factor and the production from the adjusted previous stack test results for this emissions unit conducted in July 2009 (same as hourly limitation), as shown below:

$$\mathrm{PE/PM_{10}\ EF} = 13.23\ \frac{\mathrm{lbs\ PE/PM_{10}}}{\mathrm{hr}}\ \mathrm{x}\ \frac{1\ \mathrm{hr}}{113.33\ \mathrm{tons}} = 0.117\frac{\mathrm{lbs\ PE/PM_{10}}}{\mathrm{ton\ asphalt}}$$

This is then multiplied by the annual production limitation and divided by 2000 pounds per ton, as shown below:

$$\mathrm{PE/PM_{10}} = 0.117\frac{\mathrm{lbs\ PE/PM_{10}}}{\mathrm{ton\ asphalt}}\ \mathrm{x}\ 200{,}000\frac{\mathrm{tons\ asphalt}}{\mathrm{yr}}\ \mathrm{x}\ \frac{1\ \mathrm{ton}}{2000\ \mathrm{lbs}}$$
$$= 11.70\frac{\mathrm{ton\ PE/PM_{10}}}{\mathrm{yr}}$$

f. <u>Emission Limitations:</u>

VOC from the stack shall not exceed 0.82 tons per rolling, 12-month period.

<u>Applicable Compliance Method:</u>

Compliance with the annual emission limitation shall be determined by multiplying the recorded emission rate from the most recent emission testing, in pounds of VOC per ton of asphalt produced, by the actual rolling 12 month summation of asphalt produced, in tons per rolling 12-month period, [as derived from the appropriate records required in d)(4)] and dividing by 2000 pounds.

The permittee shall determine compliance with the pounds of VOC per ton of asphalt produced below in accordance with the testing requirements in f)(2).

The annual emission limitation was established using AP-42 Table 11.1-6 (04/2004) emission factor of 0.0082, in units of lbs of VOC per ton of asphalt produced and multiplying by the maximum annual production and dividing by 2000 pounds as shown below:

$$\mathrm{VOC} = 0.0082\frac{\mathrm{lbs\ VOC}}{\mathrm{tonasphalt}}\ \mathrm{x}\ 200{,}000\frac{\mathrm{tons\ asphalt}}{\mathrm{yr}}\ \mathrm{x}\ \frac{1\ \mathrm{ton}}{2000\ \mathrm{lbs}} = 0.82\ \frac{\mathrm{tons\ VOC}}{\mathrm{yr}}$$

g. Emission Limitations:

$SO_2$from the stack shall not exceed 0.58 pounds per hour and 0.46 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined by multiplying the recorded emission rate from the most recent emission testing, in pounds of SO_2 per ton of asphalt produced, by the actual rolling 12 month summation of asphalt produced, in tons per rolling 12-month period, [as derived from the appropriate records required in d)(4)] and dividing by 2000 pounds.

The permittee shall determine compliance with the short term emission limitation above in accordance with the testing requirements in f)(2).

The hourly emission limitation was established using AP-42 Table 11.1-5 (04/2004) emission factor of 0.0046, in units of lbs of SO_2 per ton of asphalt produced and multiplying by the maximum hourly production, as shown below:

$$SO_2 = 0.0046 \frac{\text{lbs } SO_2}{\text{tonasphalt}} \text{ x } 125 \frac{\text{tons asphalt}}{\text{hr}} = 0.58 \frac{\text{tons } SO_2}{\text{hr}}$$

The annual emission limitation was established using AP-42 Table 11.1-5 (04/2004) emission factor of 0.0046, in units of lbs of SO_2 per ton of asphalt produced and multiplying by the maximum annual production and dividing by 2000 pounds as shown below:

$$SO_2 = 0.0046 \frac{\text{lbs } SO_2}{\text{tonasphalt}} \text{ x } 200{,}000 \frac{\text{tons asphalt}}{\text{yr}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.46 \frac{\text{tons } SO_2}{\text{yr}}$$

h. Emission Limitations:

$NO_X$from the stack shall not exceed 2.50 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined by multiplying the recorded emission rate from the most recent emission testing, in pounds of NO_X per ton of asphalt produced, by the actual rolling 12 month summation of asphalt produced, in tons per rolling 12-month period, [as derived from the appropriate records required in d)(4)] and dividing by 2000 pounds.

The permittee shall determine compliance with the pounds of NO_X per ton of asphalt produced below in accordance with the testing requirements in f)(2).

The annual emission limitation was established using AP-42 Table 11.1-5 (04/2004) emission factor of 0.025, in units of lbs of NO_X per ton of asphalt

produced and multiplying by the maximum annual production and dividing by 2000 pounds as shown below:

$$NO_X = 0.025 \frac{\text{lbs } NO_X}{\text{ton asphalt}} \text{ x } 200{,}000 \frac{\text{tons asphalt}}{\text{yr}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 2.50 \frac{\text{tons } NO_X}{\text{yr}}$$

i. Emission Limitations:

CO from the stack shall not exceed 40.00 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be determined by multiplying the recorded emission rate from the most recent emission testing, in pounds of CO per ton of asphalt produced, by the actual rolling 12 month summation of asphalt produced, in tons per rolling 12-month period, [as derived from the appropriate records required in d)(4)] and dividing by 2000 pounds.

The permittee shall determine compliance with the pounds of CO per ton of asphalt produced below in accordance with the testing requirements in f)(2).

The annual emission limitation was established using AP-42 Table 11.1-5 (04/2004) emission factor of 0.40, in units of lbs of CO per ton of asphalt produced and multiplying by the maximum annual production and dividing by 2000 pounds as shown below:

$$CO = 0.40 \frac{\text{lbs CO}}{\text{ton asphalt}} \text{ x } 200{,}000 \frac{\text{tons asphalt}}{\text{yr}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 40.00 \frac{\text{tons CO}}{\text{yr}}$$

j. Emissions Limitations:

Fugitive emissions from asphalt load out operations:

PM_{10} emissions shall not exceed 0.05 ton per rolling, 12-month period;

VOC emissions shall not exceed 0.39 ton per rolling, 12-month period; and

CO emissions shall not exceed 0.13 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be assumed based upon the following worst case calculations, which were used to establish the emission limitations:

Fugitive emissions from the hot end (hot mix asphalt (HMA) load-out) are calculated as follows from AP-42, Table 11.1-14 (3/2004):

Activity	Pollutant	Predictive Emission Factor Equation, lb/ton
Load-out	PE/PM_{10}	$EF=0.000181+0.00141(-V)e^{((0.0251)(T+460)-20.43)}$

Load-out	VOC	$EF= [0.0172(-V)e^{((0.0251)(T+460)-20.43)}] \times (1-0.073)$
Load-out	CO	$EF=0.00558(-V)e^{((0.0251)(T+460)-20.43)}$

Where:

V = -0.5 and T = 325°F as default.

For plant load-out, 7.3 percent of TOC is not VOC (AP-42 Table 11.1-16 (3/2004))

Based on the above information, the emission factors and emissions for 200,000 tons asphalt/yr are as follows:

Activity	Pollutant	EF (lbs/ton)	Annual Limit (tons/yr)
Load-out	PE/PM_{10}	5.22×10^{-4}	0.05
Load-out	VOC	3.86×10^{-3}	0.39
Load-out	CO	1.35×10^{-3}	0.13

Note: No asphalt silo filling operations occur at this emission unit.

k. Emissions Limitation:

Fugitive PM_{10} emissions from cold end operations (cold aggregate, sand, and lime loading and transfer operations) shall not exceed 1.28 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emissions limitation shall be assumed based upon the following worst case calculations, which were used to establish the emission limitations:

Fugitive emissions from the cold end are calculated as follows from AP-42, Table 11.12-2 (6/2006):

Hopper loading:

$$200{,}000 \frac{\text{tons raw material}}{\text{yr}} \text{ x } 0.0028 \frac{\text{lb PM}_{10}}{\text{ton raw material}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.28 \frac{\text{tons PM}_{10}}{\text{yr}}$$

Aggregate transfer:

$$100{,}000 \frac{\text{tons aggregate}}{\text{yr}} \text{ x } 0.0033 \frac{\text{lb PM}_{10}}{\text{ton aggregate}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.17 \frac{\text{tons PM}_{10}}{\text{yr}}$$

Sand transfer:

$$100{,}000 \frac{\text{tons sand}}{\text{yr}} \text{ x } 0.00099 \frac{\text{lb PM}_{10}}{\text{ton sand}} \text{ x } \frac{1 \text{ ton}}{2000 \text{ lbs}} = 0.05 \frac{\text{tons PM}_{10}}{\text{yr}}$$

Lime loading & transfer:

$$10{,}000\ \frac{\text{tons lime}}{\text{yr}}\ \text{x}\ 0.156\ \frac{\text{lb PM}_{10}}{\text{ton lime}}\ \text{x}\ \frac{1\ \text{ton}}{2000\ \text{lbs}} = 0.78\ \frac{\text{tons PM}_{10}}{\text{yr}}$$

The sum of the above is:

$$0.28\ \frac{\text{tons PM}_{10}}{\text{yr}} + 0.17\ \frac{\text{tons PM}_{10}}{\text{yr}} + 0.05\ \frac{\text{tons PM}_{10}}{\text{yr}} + 0.78\ \frac{\text{tons PM}_{10}}{\text{yr}} = 1.28\frac{\text{tons PM}_{10}}{\text{yr}}$$

l. <u>Emission Limitation:</u>

There shall be no visible emissions of fugitive dust from the enclosures for the hot aggregate elevator, vibrating screen, weigh hopper, and rotary dryer.

<u>Applicable Compliance Method:</u>

Compliance shall be demonstrated by the monitoring and record keeping in term d)(8) above. Upon request by the Ohio EPA District Office or local air agency, compliance with the visible emissions limitation for the fugitive dust identified in this permit shall be determined according to USEPA Method 22 of 40 CFR Part 60, Appendix A, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.. The permittee shall also comply with the testing requirements in f)(2).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The testing shall be conducted and completed, after final issuance of this permit, during (but no later than the end of) the 2016 production season, to demonstrate compliance with the stack emission limitations established pursuant to OAC rule 3745-31-05(A)(3), and from 40 CFR Part 60 Subpart I, Section 60.92(a), as specified in f)(1)a., b., c., and d. above. The particulate matter emission testing shall be conducted in accordance with the provisions of 40 CFR Part 60, Subpart I, Section 60.93.

For purposes of this permit, the production season is defined as the time period between the date the first ton of asphalt is produced and the date that the last ton of asphalt is produced during the same calendar year.

In addition, testing shall be conducted as required by c)(6), if necessary.

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for visible emissions (opacity), PE/PM_{10}, VOC, CO, NO_x and SO_2. If emission testing is necessary as required in c)(6), testing shall be conducted to demonstrate compliance with the allowable mass emission rates for PE/PM_{10},CO, and NO_X,

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s) for:

PE, Methods 1-5 of 40 CFR Part 60, Appendix A

Visible Emissions (Opacity), Method 9 of 40 CFR Part 60, Appendix A

NO_x, Methods 1-4 and 7 or 7E of 40 CFR Part 60, Appendix A

SO_2, Methods 1-4 and 6 or 6C of 40 CFR Part 60, Appendix A

CO, Methods 1-4 and 10 of 40 CFR Part 60, Appendix A

VOC, Methods 1-4 and 18, 25 or 25A, as applicable, of 40 CFR Part 60, Appendix A

The VOC pounds per hour emission rate observed during the emission test shall be calculated in accordance with OAC rule 3745-21-10(C)(7). In lieu of this, the permittee shall convert the mass emission value from VOC as carbon to VOC using the molecular weight of propane, i.e., the VOC as carbon emission rate observed during testing shall be converted to the appropriate units by multiplying the VOC emission rate observed during testing (in lbs/hr) by 44 (propane) and dividing by 36 (3 atoms of carbon).

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. During the emissions testing, the emissions unit shall be operated under operational conditions approved in advance by the appropriate Ohio EPA District Office or local air agency. Operational conditions that may need to be approved include, but are not limited to, the production rate, the type of material processed, material make-up (solvent content, etc.), or control equipment operational limitations (burner temperature, precipitator voltage, etc.). In general, testing shall be done under “worst case” conditions expected during the life of the permit. As part of the information provided in the “Intent to Test” notification form described below, the permittee shall provide a description of the emissions unit operational conditions they will meet during the emissions testing and describe why they believe “worst case” operating conditions will be met. Prior to conducting the test(s), the permittee shall confirm with the appropriate Ohio EPA District Office or local air agency that the proposed operating conditions constitute “worst case”. Failure to test under the approved conditions may result in the appropriate Ohio EPA District Office or local air agency not accepting the test results as a demonstration of compliance.

e. Monitoring and recording of the pressure drop of the wet scrubber shall be conducted at 15 minute intervals during the duration of the test(s). Hourly averages of the readings shall be used to establish and/or re-verify the pressure drop range specified in term d)(2).

f. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating

parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the appropriate Ohio EPA District Office or local air agency's refusal to accept the results of the emission test(s).

g. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

h. A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

(3) Burner Evaluation/Tuning

a. Introduction

The permittee is required to conduct periodic evaluation/tuning of the asphalt plant burner as set forth below. The purpose of this evaluation/tuning is to ensure that the burner is adjusted and maintained in order to make the burner as fuel efficient as possible.

b. Qualifications for Burner Evaluation/Tuning

Technicians who conduct the burner evaluation/tuning must be qualified to perform the expected burner evaluation/tuning tasks. In order to be qualified, the technician must have passed manufacturer's training concerning burner evaluation/tuning, or must have been trained by someone who has completed the manufacturer's training concerning burner evaluation/tuning. Burner evaluation/tuning technicians can be either permittee employees or outside parties.

c. Portable Monitor Requirements

Portable monitors used for burner evaluation/tuning shall be properly operated and maintained to monitor the concentration of NO_x, O_2 and CO in the stack exhaust gases from this emissions unit. The monitor(s) shall be capable of measuring the expected concentrations of the measured gases. The monitoring equipment shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The owner or operator of the portable monitor shall maintain records of each portable monitoring device's calibration.

d. Burner Evaluation/Tuning Procedure

An alternative form may be used as long as it contains the same data elements as the Burner Evaluation/Tuning Reporting Form for Asphalt Concrete Plants form.

The burner shall be evaluated and, if necessary, tuned based on the frequency described in f)(3)e.

The general procedure for evaluating and, if necessary, tuning the burner involves the following steps:

i. Review the plant operations to ensure the plant is operating normally based on weather conditions and production.

ii. Confirm that the portable monitor is calibrated per the manufacturer's specifications.

iii. Using the calibrated monitor and the monitor manufacturer's recommended sampling duration, measure the stack exhaust gas values for NO_x, O_2, and CO. These measurements shall be taken at a location representative of stack emissions. Record the values in the "Pre-Tuning" results column on the Burner Tuning Reporting Form for Asphalt Concrete Plants form (as found in g)). An alternative form may be used as long as it contains the same data elements as the Burner Evaluation/Tuning Reporting Form for Asphalt Concrete Plants form.

iv. Make any necessary adjustments and repairs to the burner in order to make the burner as fuel efficient as possible.

v. If adjustments or repairs are made to the burner, then the technician shall re-measure the stack exhaust gas values for NO_x, O_2, and CO. This procedure shall be repeated until the technician is satisfied that the burner has been appropriately tuned. Once he/she is satisfied, then the technician shall record the post tune NO_x, O_2, and CO values in the "Post Tuning" results column on the Burner Tuning Reporting Form for Asphalt Concrete Plants (or equivalent) form.

Note that the Ohio EPA reserves the right to require permittees to conduct additional emissions tests to verify compliance. Operators who choose not to keep their burners in tune are more likely to be required by Ohio EPA to conduct additional emissions tests to verify compliance. Therefore, it is recommended that permittees make necessary adjustments and repairs to burners as soon as possible and verify that the burner is operating as designed.

vi. Submit a copy of all Burner Evaluation/Tuning Reporting Form(s) for Asphalt Concrete Plants forms produced during the past calendar year to the appropriate Ohio EPA District Office or local air agency responsible for the permitting of the facility with the PER. Note: These forms are required to be submitted even if the burner is not actually adjusted.

e. Burner Tuning Frequency

The permittee shall conduct the burner evaluation/tuning procedure within 30 production days after commencement of the production season in the State of Ohio. The permittee shall conduct another burner evaluation/tuning procedure within 15 production days before or after June 1st of each year and within 15 production days before or after September 1st of each year. For purposes of this permit, the production season is defined as the time period between the date the first ton of asphalt is produced and the date that the last ton of asphalt is produced during the same calendar year. A burner evaluation/tuning is not required if the production season ends prior to the associated evaluation/tuning due date. If the initial season evaluation/tuning is done within 30 days prior to June 1 or September 1, the tuning associated with that due date is not required.

In addition to the burner evaluation/tuning procedure required above, the permittee shall conduct the burner evaluation/tuning procedure within 20 production days from the date the facility switches to a fuel that is different than the fuel burned during the most recent burner evaluation/tuning procedure.

g) Miscellaneous Requirements

(1) Burner Tuning Form (See next page)

BURNER EVALUATION/TUNING REPORTING FORM FOR ASPHALT CONCRETE PLANTS	
Facility ID:	Evaluation/Tuning Date:
Legal Name:	Other Company Name (if different than legal name):
Mailing Address:	Other Company Site Address: (if different than mailing address):
City, State, Zip Code:	Other Company City, County, Zip Code:
Site Contact Person:	Site Contact Telephone Number:
Site Contact Title:	Site Contact Fax Number:
Name of company performing evaluation/tuning:	Name of company performing emission monitoring:
Type of plant (ie: batch, drum mix, etc.):	Calibration date for analyzers:

Reason for Evaluation/Tuning: ☐ Season Initial Tuning ☐ June Tuning ☐ September Tuning

☐ Fuel Switch ☐ Other (describe)

Fuel employed during evaluation/tuning: ☐ Natural Gas ☐ Propane ☐ # 2 Fuel Oil ☐ # 4 Fuel Oil ☐ Used Oil ☐ Other (describe)

Evaluation/Tuning Results:

Parameter	**Results**	
	Pre Tuning	**Post Tuning[2]**
Fuel flow to the burner (gallon/hr) (for fuel oil and on-spec used oil)		
Fuel pressure (psi)		
For burners that require compressed air for proper operation, pressure at the burner (psi)		
Carbon Monoxide (CO) concentrations (ppm)[1]		
NOx concentrations (ppm)[2]		
Oxygen concentrations (per cent)[2]		

Asphalt Production (tons/hr)		

[1] Specify whether on a dry or wet basis.

[2] If the burner did not require adjusting, please record N/A in the post tuning column.

Describe in detail a list of adjustments and/or repairs made to bring the operating parameters into conformance with the manufacturer's specifications. Use additional paper if necessary.

Authorized Signature: This signature shall constitute personal affirmation that all statements or assertions of fact made in this form are true and complete, comply fully with applicable state requirements, and shall subject the signatory to liability under applicable state laws forbidding false or misleading statements.

Name of Official (Printed or Typed):	Title of Official and Phone Number:
Signature of Official:	Date: