



Environmental
Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

2/6/2012

JAMES ULIZZI
THORWORKS INDUSTRIES INC.
PO BOX 2277
SANDUSKY, OH 44871-2277

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0322020274
Permit Number: P0108988
Permit Type: Initial Installation
County: Erie

Certified Mail

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

Dear Permit Holder:

Enclosed please find a final 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. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI 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
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPC Web page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-NWDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
THORWORKS INDUSTRIES INC.**

Facility ID:	0322020274
Permit Number:	P0108988
Permit Type:	Initial Installation
Issued:	2/6/2012
Effective:	2/6/2012
Expiration:	7/29/2019



Division of Air Pollution Control
Permit-to-Install and Operate
for
THORWORKS INDUSTRIES INC.

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Authorization

Facility ID: 0322020274
Application Number(s): A0043078
Permit Number: P0108988
Permit Description: Initial Installation to convert emissions units P901, P902 and P001 from a portable to stationary source.
Permit Type: Initial Installation
Permit Fee: \$900.00
Issue Date: 2/6/2012
Effective Date: 2/6/2012
Expiration Date: 7/29/2019
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

THORWORKS INDUSTRIES INC.
2520 SOUTH CAMPBELL STREET
Sandusky, OH 44870

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

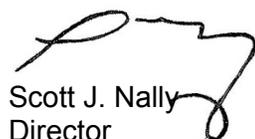
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

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


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0108988
Permit Description: Initial Installation to convert emissions units P901, P902 and P001 from a portable to stationary source.

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

Emissions Unit ID:	P001
Company Equipment ID:	P001
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P901
Company Equipment ID:	P901
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P902
Company Equipment ID:	P902
Superseded Permit Number:	
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. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. 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 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 Ohio EPA DAPC, Northwest District Office 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 submitting¹ 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 emissions 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 being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

¹Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

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.

C. Emissions Unit Terms and Conditions



1. P001, Sand and aggregate dryer (70 tons per hour) with baghouse control

Operations, Property and/or Equipment Description:

Sand and aggregate drying

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. b)(1)g. and b)(2)d.

(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. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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(F)	<p><u>Fuel Combustion Emissions (burning natural gas or propane):</u> Nitrogen Oxides (NO_x) emissions shall not exceed 0.0955 pounds per ton of material produced.</p> <p>Sulfur dioxide (SO₂) emissions shall not exceed 0.00371 pounds per ton of material produced.</p> <p>SO₂ emissions shall not exceed 1.14 tons per year.</p> <p>Carbon monoxide (CO) emissions shall not exceed 0.229 pounds per ton of material produced.</p> <p>Volatile organic compound (VOC) emissions shall not exceed 0.00743 pounds per ton of material produced.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>VOC emissions shall not exceed 2.28 tons per year.</p> <p>Particulate emissions (PE) shall not exceed 0.009 pounds per ton of material produced.</p> <p>PE shall not exceed 2.76 tons per year.</p> <p>The requirements of this rule also include compliance with the requirements of NSPS Subparts I and UUU.</p> <p>See b)(2)a.and b)(2)b.</p>
b.	ORC 3704.03(T)	<p>NO_x emissions shall not exceed 24.98 tons per year.</p> <p>CO emissions shall not exceed 70.21 tons per year.</p>
c.	NSPS Subpart I	<p><u>When drying aggregate:</u> PE shall not exceed 0.04 grains per dry standard cubic foot</p> <p>PE shall exhibit less than 20% opacity</p>
d.	NSPS Subpart UUU	<p><u>When drying sand:</u> PE shall not exceed 0.025 grains per dry standard cubic foot</p> <p>PE shall not exceed 10% opacity</p>
e.	OAC rule 3745-17-07(A)(1) OAC rule 3745-17-11(B)(3) OAC rule 3745-18-06(E)(2)	The emissions limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3), 40 CFR Part 60Subparts I and UUU.
f.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c.
g.	OAC rule 3745-31-05(A)(3), as effective 12/01/06	See b)(2)d.

(2) Additional Terms and Conditions

- a. Permit to Install and Operate (PTIO) P0108988 for this air contaminant source takes into account the following voluntary restrictions, as proposed by the permittee for the purpose of establishing legally and practically enforceable limitations representing the potential to emit for NO_x, CO, SO₂, VOC and PE:

- i. use of a fabric filtration control system achieving an outlet concentration complying with NSPS requirements. The fabric filtration control system shall consist of a baghouse to control particulate matter emissions from aggregate and sand drying operations;
 - ii. a mass emission rate limitation of 0.0955 pounds NO_x/ton of material produced, 0.00371 pounds SO₂/ton of material produced, 0.229 pounds CO/ton of material produced, 0.00743 pounds VOC/ton of material produced and 0.009 pounds PE/ton of material produced;
 - iii. an annual emission limitation of 1.14 tons SO₂ and 2.28 tons VOC; and
 - iv. no visible emissions of fugitive dust from the enclosures of the rotary drum mixer/dryer.
- b. The permittee shall comply with all requirements of NSPS Subparts I and UUU.
- c. Best Available Technology (BAT) requirements for these emissions units has been determined to be compliance with the voluntary restrictions established in accordance with OAC rule 3745-31-05(F) [see b)(2)a.]. The voluntary restrictions were intentionally established to be consistent with the BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 for two specific purposes as indicated below:
- i. BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 would be fulfilled by compliance with the voluntary restrictions;
 - ii. The emissions unit will avoid any BAT requirements under OAC rule 3745-31-05(A)(3), as effective 12/01/06 [see b)(2)d.].

The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

It should be noted that the requirements established pursuant to OAC rule 3745-31-05(F) will remain applicable after the above SIP revisions are approved by U.S. EPA.

- d. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05 (A)(3)(a) do not apply to the emissions of PM10, SO2 and VOC since the potential to emit, taking into account the voluntary restriction, is less than 10 tons per year.

c) Operational Restrictions

- (1) The maximum annual sand and aggregate throughput from this emissions unit shall not exceed 613,200 tons. This restriction is based on the maximum throughput of dryer operating at 8,760 hours per year.
- (2) The permittee shall operate and maintain the fuel burner in accordance with the manufacturer's recommendations to ensure efficient combustion of the fuel(s) and to ensure compliance with the applicable emission limitations for VOC, CO and NO_x. 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 Ohio EPA Northwest District Office with the PER.
- (3) The permittee shall only burn natural gas or propane gas in this emissions unit.
- (4) The emissions from this emissions unit shall be vented to a baghouse at all times the emissions unit is in operation.
- (5) The pressure drop across the baghouse shall be maintained within the range of 0.5 to 7.5 inches of water while the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain monthly records of the following information:
 - a. total aggregate dried in this emissions unit;
 - b. the total sand dried in this emissions unit;
 - c. the annual, year-to-date particulate, SO₂, NO_x, VOC and CO emissions, based on actual usage [summation of d)(1)b. for each calendar month, to date from January to December].
- (2) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving 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 incident; and

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

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident 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.

- (3) 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 Northwest District Office.
- (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 is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted and the appropriate range is established to demonstrate compliance.
- (5) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable range established for the pressure drop across the baghouse is between 0.5 to 7.5 inches of water.
- (6) 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.

This 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 Ohio EPA Northwest District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. 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.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall identify in the annual permit evaluation report the following information concerning the operations of the baghouse during the 12-month reporting period for this/these emissions unit(s):
 - 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. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
 - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;

- d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- f) Testing Requirements
- (1) Compliance with the emission limitations in section b)(1) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitations:

NO_x emissions shall not exceed 0.0955 pounds per ton of material produced.

SO₂ emissions shall not exceed 0.00371 pounds per ton of material produced.

CO emissions shall not exceed 0.229 pounds per ton of material produced.

VOC emissions shall not exceed 0.00743 pounds per ton of material produced.

PE shall not exceed 0.009 pounds per ton of material produced.

Applicable Compliance Method:

Compliance with the emission limitations were demonstrated by emission testing conducted June 28-30, 2011. If required, additionally testing shall be conducted in accordance with the following methods:

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

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

SO₂, 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, 18 and 25 or 25A of 40 CFR Part 60, Appendix A

The VOC pounds per hour emission rate observed during the emissions test shall be calculated in accordance with OAC paragraph 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.

b. Emission Limitation:

PE shall not exceed 0.04 grains per dry standard cubic foot when drying aggregate

PE shall exhibit less than 20% opacity when drying aggregate

Applicable Compliance Method:

Compliance with the emission limitations were demonstrated by emission testing conducted June 28-30, 2011. If required, additionally testing shall be conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The permittee shall demonstrate compliance with the visible emission limitation in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

c. Emission Limitation:

PE shall not exceed 0.025 grains per dry standard cubic foot when drying sand

PE shall exhibit no more than 10% opacity when drying sand

Applicable Compliance Method:

Compliance with the emission limitations were demonstrated by emission testing conducted June 28-30, 2011. If required, additionally testing shall be conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The permittee shall demonstrate compliance with the visible emission limitation in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03

d. Emission Limitation:

VOC emissions shall not exceed 2.28 tons per year

CO emissions shall not exceed 70.21 tons per year

SO₂ emissions shall not exceed 1.14 tons per year

emissions shall not exceed 24.98 tons per year

PE shall not exceed 2.76 tons per year

NO_x

Applicable Compliance Method:

Compliance shall be demonstrated by the monitoring and recordkeeping requirements in d)(1).

(2) Burner Tuning

a. Introduction

The permittee shall submit for approval from Ohio EPA a "burner tuning procedure" for this facility by April 1st of each year. The burner tuning procedure shall contain the basic elements as described in the language below with the ability for the permittee to adjust the frequency of the burner tuning procedure depending upon the production of the plant. The submittal of the "burner tuning procedure" is independent of the PER submittal. If approval is not granted, then the permittee shall submit another burner tuning procedure within 30 days of receiving a written disapproval. In the event no burner tuning procedure is submitted and approved within the specified timelines then the following shall be adhered to:

b. Qualifications for Burner Tuning

Technicians who conduct the burner tuning must be qualified to perform the expected tasks. The permittee is required to provide training to the technicians who perform the burner tuning procedure. Technicians who are qualified shall, at a minimum, have passed manufacturer's training concerning burner tuning, or have been trained by someone who has completed the manufacturer's training concerning burner tuning.

c. Portable Monitor Requirements

The permittee shall properly operate and maintain portable device(s) to monitor the concentration of NO_x, O₂ 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 permittee shall maintain records of each portable monitoring device's calibration.

d. Burner Tuning Procedure

The first steps concerning burner tuning involve setting the pollutant baseline levels (concentrations) utilizing the portable monitor. These baselines shall be set during the initial U.S. EPA approved emissions testing that demonstrated the emissions unit was in compliance with all applicable emissions limitations as described in f)(1). The baselines shall be determined for NO_x and CO. Sampling should measure the exhaust gas values exiting the dryer or the baghouse. The duration of each sample shall follow the portable monitor manufacturer's recommendations. Record these values on the *Burner Tuning Reporting Form for Asphalt Concrete Plants* form (as found in g)(2)) in the "Recent Stack Test Basis Values" column.

Once the pollutant baseline levels are set, the burner shall be next tuned based on the frequency described in f)(2)e. The general procedure for tuning the burner involves the following steps:

- i. Review the plant operations to ensure the plant is operating normally.
- 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 O₂, NO_x, and CO. These measurements shall be taken at the same location as the location where the baseline samples were taken. Record the values in the "Pre-Tuning" results column on the *Burner Tuning Reporting Form for Asphalt Concrete Plants* form.
- iv. Compare the measured stack exhaust gas values with the pollutant baseline values. If all of the measured stack exhaust gas values are equal to or less than 115 per cent of the pollutant baseline values, then it is not necessary to tune the burner. Go on to Section v. below.

The permittee shall have the burners tuned within two calendar weeks of any measured stack exhaust values greater than 115 per cent of the baseline values. Make any necessary adjustments and repairs. Repeat Sections iii. and iv. until the measured stack exhaust gas values are equal to or less than 115 per cent of the pollutant baseline values.

- v. Once all of the measured stack exhaust gas values are within the 115 per cent of the pollutant baseline values, record the measured stack exhaust gas values in the "Post-Tuning" results column on the *Burner Tuning Reporting Form for Asphalt Concrete Plants* form.
 - vi. By January 31st of each year, submit a copy of all *Burner Tuning Reporting Form for Asphalt Concrete Plants* forms produced during the past calendar year to the Ohio EPA Northwest District Office.
- e. Burner Tuning Frequency

The permittee shall conduct the burner tuning procedure within 20 production days after commencement of the production season in the State of Ohio. The permittee shall conduct another burner tuning procedure within 10 production days before or after June 1st of each year and within 10 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 material is produced and the date that the last ton of material is produced during the same calendar year. A burner tuning is not required if the production season ends prior to the associated tuning due date. If the baseline level testing or the initial season tuning is done within 30 days prior to June 1st or September 1st, the tuning associated with that due date is not required.

In addition to the burner tuning procedure required above, the permittee shall conduct the burner tuning procedure within 20 production days from the date the facility switches to a fuel that is different than the fuel burned during the initial emissions tests that establish the pollutant baseline levels or the fuel burned during the most recent burner tuning procedure, whichever is later.

- g) Miscellaneous Requirements
 - (1) Burner Tuning Form (see next page)



BURNER TUNING REPORTING FORM FOR ASPHALT CONCRETE PLANTS	
Facility ID:	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 tuning:	Name of company performing emission monitoring:
Type of plant (i.e.: batch, drum mix, etc.):	Calibration date for analyzers:

Reason for Tuning: Season Initial Tuning June Tuning September Tuning Fuel Switch Other(describe)

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

Tuning Results:

Parameter	Recent Stack Test Pollutant Baseline Levels ¹	Results	
		Pre Tuning	Post Tuning ³
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) ²			
NOx concentrations (ppm) ²			
Oxygen concentrations (per cent) ²			
Asphalt Production (tons/hr)			

¹These values are based on the results of the most recent Ohio EPA approved emissions test.

² Specify whether on a dry or wet basis.

³ 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 manufacturers 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:



2. P901, Sand and aggregate receiving, handling, storage and sand mixing/preparation

Operations, Property and/or Equipment Description:

Sand and Aggregate Preparation

- 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. b)(1)c. and b)(2)d.
(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. None.
b) Applicable Emissions Limitations and/or Control Requirements
(1) The specific operations(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. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Table with 2 columns: Applicable Rules/Requirements and Applicable Emissions Limitations/Control Measures. It lists specific rules like OAC rule 3745-31-05(F) and their corresponding emission limits for fugitive and stack emissions.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-08(B)	see b)(2)e.
e.	OAC rule 3745-17-07(B)	See b)(2)f.
f.	OAC rule 3745-17-07(A)	see b)(2)g.
g.	OAC rule 3745-17-11(B)(3)	see b)(2)h.

(2) Additional Terms and Conditions

- a. Permit to Install and Operate (PTIO) P0108988 for this air contaminant source takes into account the following voluntary restrictions, as proposed by the permittee for the purpose of establishing legally and practically enforceable limitations representing the potential to emit for PE and PM₁₀:
 - i. use of a dust collector for each of the two sand mixing operations that achieves 98% control efficiency;
 - ii. a mass emission rate limitation of 1.85 tons of fugitive PM₁₀/year. The mass emission rate represents the total fugitive emissions from both the sand and aggregate operations; and
 - iii. a mass emission rate limitation of 0.04 ton PM/year and 0.02 ton PM₁₀/year. The mass emission rate represents the total stack emissions from both sand mixing operations.
- b. Visible particulate emissions from the sand and aggregate transferring and mixing equipment associated with this emissions unit shall not exceed the following opacity restrictions:

Emissions Point	Equipment Type	Opacity Limit	Regulatory Basis for Limit
Aggregate Storage Bins	Transfer Point	10%	OAC Rule 3745-31-05(F)
Sand Silo to Mixer	Transfer Point	10%	OAC Rule 3745-31-05(F)
Sand Mixer 1 (stack)	Mixer	10%	OAC Rule 3745-31-05(F)
Sand Mixer 2 (stack)	Mixer	10%	OAC Rule 3745-31-05(F)
Sand Mixer 1 to Conveyor 1	Transfer Point	5%	OAC Rule 3745-31-05(F)
Sand Mixer 2 to Conveyor 2	Transfer Point	5%	OAC Rule 3745-31-05(F)
Conveyor 1 to 4-Bin Feed Hopper	Transfer Point	15%	OAC Rule 3745-31-05(F)
Conveyor 2 to 4-Bin Feed Hopper	Transfer Point	15%	OAC Rule 3745-31-05(F)

Feed Hopper to Conveyor 3	Transfer Point	15%	OAC Rule 3745-31-05(F)
Conveyor 3 to Conveyor 4	Transfer Point	15%	OAC Rule 3745-31-05(F)
Conveyor to Dryer	Transfer Point	15%	OAC Rule 3745-31-05(F)

Compliance with the opacity restrictions for these emissions points shall be achieved on and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup.

- c. Best Available Technology (BAT) requirements for these emissions units has been determined to be compliance with the voluntary restrictions established in accordance with OAC rule 3745-31-05(F) [see b)(2)a.]. The voluntary restrictions were intentionally established to be consistent with the BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 for two specific purposes as indicated below:
 - i. BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 would be fulfilled by compliance with the voluntary restrictions;
 - ii. The emissions unit will avoid any BAT requirements under OAC rule 3745-31-05(A)(3), as effective 12/01/06 [see b)(2)d.].

The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

It should be noted that the requirements established pursuant to OAC rule 3745-31-05(F) will remain applicable after the above SIP revisions are approved by U.S. EPA.

- d. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05 (A)(3)(a) do not apply to the emissions of PM10 since the potential to emit, taking into account the voluntary restriction on the use of a baghouse, is less than 10 tons per year.



- e. This facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
f. This emissions unit is exempt from the visible emissions limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions unit is not located within areas identified in "Appendix A" of OAC rule 3745-17-08.
g. The visible emission limitations specified by this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(F).
h. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).
i. The BAT requirements under OAC rule 3745-31-05(A)(3) are not applicable to the particulate emissions emitted from this emissions unit. BAT is only applicable to emissions of an air contaminant or precursor of an air contaminant for which a national ambient air quality standard (NAAQS) has been adopted under the Clean Air Act. Particulate emissions (also referred to as total suspended particulate or particulate matter) are an air contaminant that does not involve an established NAAQS.

c) Operational Restrictions

- (1) The maximum annual sand and aggregate throughput from this emissions unit shall not exceed 613,200 tons. This restriction is based on the sand and aggregate throughput of the dryer.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for this emissions unit:
a. The total tons per month of sand processed through the sand mixers and aggregate fed to the dryer; and
b. The annual, year to date tons of sand processed through the sand mixers and aggregate fed to the dryer [sum of d)(1)a. for each calendar month to date from January to December].
(2) Except as otherwise provided in this section, for conveying and mixing operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following frequencies:

Table with 2 columns: Conveying and Mixing Operation(s), Minimum Inspection Frequency. Rows include All transfer points (daily) and Sand Mixers (daily).

The above mentioned inspections shall be performed during representative, normal operating conditions.

- (3) The permittee may, upon receipt of written approval from the Ohio EPA Northwest District Office, modify the above mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above mentioned applicable requirements.
- (4) The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed;
 - b. the date of each inspection where it was determined by the permittee that it was not necessary to implement the control measure(s);
 - c. the dates the control measure(s) was/were not implemented; and
 - d. on a calendar quarter basis, the total number of days the control measure(s) was/were not implemented.

The information in d)(4)d. shall be kept separately for each conveying and mixing operation and shall be updated on a calendar basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- (2) The permittee shall identify in the annual PER the following occurrences concerning inspection and control measure requirements:
 - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
 - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.
- (3) The permittee shall also identify in the annual PER the actual sand and aggregate throughputs for this emissions unit for the previous calendar year.

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 fugitive PE shall not exceed 10% opacity for sand transfer points and 15% for aggregate transfer points

Applicable Compliance Method:

If required, compliance with the visible emission limitation specified above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

b. Emission Limitation:

Visible PE shall not exceed 5% opacity for sand mixers

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

c. Emission Limitation:

2.15 tons fugitive PM₁₀ per year

Applicable Compliance Method:

The emission limitation was established by multiplying the corresponding AP-42 emission factor (EF) with the process weight rate (PWR), multiplying by the maximum annual hours of limitation (8,760) and dividing by a conversion factor of 1 ton/2000. Provided compliance is shown with the maximum annual sand and aggregate throughput, compliance with the annual limitation will be assumed.

Emission Point	EF (lbs/ton)	PWR (tons/hr)
Aggregate Storage Bins	0.0007	100
Aggregate Transfer to Dryer	0.0007	70

Sand Mixer 1 to Conveyor 1	0.00099	40
Sand Mixer 2 to Conveyor 2	0.00099	40
Conveyor 1 to 4-Bin Feed Hopper	0.00099	40
Conveyor 2 to 4-Bin Feed Hopper	0.00099	40
Feed Hopper to Conveyor 3	0.00099	70
Conveyor 3 to Conveyor 4	0.00099	70
Conveyor 4 to Dryer	0.00099	70

d. Emission Limitation:

0.04 ton PE per year (stack emissions)

Applicable Compliance Method:

The emission limitation was established by multiplying the corresponding AP-42 emission factor (EF) with the process weight rate (PWR), applying 99.9% control efficiency, multiplying by the maximum annual hours of limitation (8,760) and dividing by a conversion factor of 1 ton/2000. Provided compliance is shown with the maximum annual sand and aggregate throughput, compliance with the annual limitation will be assumed.

Emission Point	EF (lbs/ton)	PWR (tons/hr)
Sand Mixer 1	0.12	40
Sand Mixer 2	0.12	40

e. Emission Limitation:

0.02 ton PM₁₀ per year (stack emissions)

Applicable Compliance Method:

The emission limitation was established by multiplying the corresponding AP-42 emission factor (EF) with the process weight rate (PWR), applying 99.9% control efficiency, multiplying by the maximum annual hours of limitation (8,760) and dividing by a conversion factor of 1 ton/2000. Provided compliance is shown with the maximum annual sand and aggregate throughput, compliance with the annual limitation will be assumed.



Emission Point	EF (lbs/ton)	PWR (tons/hr)
Sand Mixer 1	0.04	40
Sand Mixer 2	0.04	40

g) Miscellaneous Requirements

- (1) None.



3. P902, Product conveying, screening, mixing and packaging operations

Operations, Property and/or Equipment Description:

Product screening and packaging

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. b)(1)e. and b)(2)d.

(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. None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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(F)	<u>Stack Emissions:</u> <u>Sand</u> Particulate emissions (PE) shall not exceed 0.04 ton per year from loading in to the portable fiber mixer. 0.013 ton particulate matter ten microns in diameter or less (PM ₁₀)/year from loading in to the portable fiber mixer, see b(2)i. <u>Aggregate</u> PE shall not exceed 0.044 ton/year from the aggregate storage bin with pug mill. Volatile organic compounds (VOC) emissions shall not exceed 6.77 pounds per hour from the aggregate storage bin

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>with pug mill.</p> <p><u>Fugitive emissions:</u></p> <p><u>Sand</u> PE shall not exceed 2.56 tons/yr from the sand screening and packaging operations.</p> <p>PM₁₀ shall not exceed 1.20 tons/yr from the sand screening and packaging operation.</p> <p><u>Aggregate</u> PE shall not exceed 4.97 tons/yr from the aggregate transfer points.</p> <p>PM₁₀ shall not exceed 2.34 tons/yr from the aggregate transfer points.</p> <p>The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart I.</p> <p>see b)(2)a.andb)(2)b.</p>
c.	ORC 3704.03(T)	<p><u>Aggregate</u> VOC emissions shall not exceed 29.65 tons per year from the aggregate storage bin with pug mill.</p>
d.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)c.
e.	OAC rule 3745-31-05 (A)(3)(a)(ii), as effective 12/01/06	See b)(2)d.
f.	40 CFR Part 60, Subpart I	<p>When mixing aggregate with liquid asphalt:</p> <p>PE shall not exceed 0.04 grains per dry standard cubic foot</p> <p>PE shall exhibit less than 20% opacity</p>
g.	OAC rule 3745-17-08(B)	See b)(2)e.
h.	OAC rule 3745-17-07(B)	See b)(2)f.
i.	OAC rule 3745-17-07(A)	See b)(2)g.
j.	OAC rule 3745-17-11(B)(3)	See b)(2)h.

(2) Additional Terms and Conditions

- a. Permit to Install and Operate (PTIO) P0108988 for this air contaminant source takes into account the following voluntary restrictions, as proposed by the permittee for the purpose of establishing legally and practically enforceable limitations representing the potential to emit for VOC, PE and PM₁₀:
 - i. use of a dust collector that achieves 98% control efficiency on each the portable fiber mixer and the pug mill;
 - ii. a mass emission rate limitation of 0.04 ton PE/year and 0.013 ton PM₁₀/year from the portable fiber mixer operation;
 - iii. a mass emission rate limitation of 0.043 tons PE/year, 6.77 pounds VOC/hour from the aggregate storage bin with pug mill;
 - iv. a mass emission rate limitation of 1.20 tons PM₁₀/year from the sand screening and packaging operations; and
 - v. a mass emission rate limitation of 2.32 tons PM₁₀/year from the aggregate transfer points.
- b. Visible particulate emissions from the sand and aggregate transferring and mixing equipment associated with this emissions unit shall not exceed the following opacity restrictions:

Emissions Point	Equipment Type	Opacity Limit	Regulatory Basis for Limit
Dryer to Hopper	Transfer Point	10%	OAC Rule 3745-31-05(F)
Hopper to Screen	Transfer Point	10%	OAC Rule 3745-31-05(F)
Screen	Screen	20%	OAC Rule 3745-31-05(F)
Screen to Hopper	Transfer Point	10%	OAC Rule 3745-31-05(F)
Hopper to Portable Fiber Mixer	Transfer Point	10%	OAC Rule 3745-31-05(F)
Portable Fiber Mixer (stack)	Mixer	10%	OAC Rule 3745-31-05(F)
Mixer to Turf Filler Packaging	Transfer Point	10%	OAC Rule 3745-31-05(F)
Dryer to Conveyor 5	Transfer Point	15%	OAC Rule 3745-31-05(F)
Conveyor 5 to any of the 4 storage silos	Transfer Point	15%	OAC Rule 3745-31-05(F)
Silos to Packaging Hopper	Transfer Point	15%	OAC Rule 3745-31-05(F)
Hopper to Packaging Conveyor	Transfer Point	15%	OAC Rule 3745-31-05(F)
Conveyor 5 to Aggregate	Transfer Point	15%	OAC Rule 3745-31-05(F)

Storage Bin with Pug Mill			
Liquid Asphalt added to Pug Mill (stack)	Pug Mill	< 20%	NSPS Subpart I
Pug Mill to Packaging Hopper1	Transfer Point	15%	OAC Rule 3745-31-05(F)
Packaging Hopper 1 to Packaging Conveyor 1	Transfer Point	15%	OAC Rule 3745-31-05(F)
Pug Mill to Packaging Hopper 2	Transfer Point	15%	OAC Rule 3745-31-05(F)
Packaging Hopper 2 to Packaging Conveyor 2	Transfer Point	15%	OAC Rule 3745-31-05(F)

Compliance with the opacity restrictions for these emissions points shall be achieved on and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup.

- c. Best Available Technology (BAT) requirements for these emissions units has been determined to be compliance with the voluntary restrictions established in accordance with OAC rule 3745-31-05(F) [see b)(2)a.]. The voluntary restrictions were intentionally established to be consistent with the BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 for two specific purposes as indicated below:
 - i. BAT requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01 would be fulfilled by compliance with the voluntary restrictions;
 - ii. The emissions unit will avoid any BAT requirements under OAC rule 3745-31-05(A)(3), as effective 12/01/06 [see b)(2)d.].

The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/control measures no longer apply.

It should be noted that the requirements established pursuant to OAC rule 3745-31-05(F) will remain applicable after the above SIP revisions are approved by U.S. EPA.

- d. This rule applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05 (A)(3)(a) do not apply to the emissions of PM10 since the potential to emit, taking into account the voluntary restriction on the use of a baghouse, is less than 10 tons per year.

- e. This facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B).
- f. This emissions unit is exempt from the visible emissions limitations for fugitive dust, specified in OAC rule 3745-17-07(B), pursuant to OAC rule 3745-17-07(B)(11)(e), because the emissions unit is not located within areas identified in "Appendix A" of OAC rule 3745-17-08.
- g. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F).
- h. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(F) and NSPS Subpart I.

c) Operational Restrictions

- (1) The emissions from the portable fiber mixer and the pug mill shall be vented to a dust collector at all times that the process is in operation.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving 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 incident; and
 - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d above or continue the daily check until the incident has ended. The observer may indicate that the visible emission incident 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.

- (2) 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 transferring and conveying operations 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.
- e) Reporting Requirements
- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency 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. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
 - (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for visible emissions in d)(1) and d)(2) above:
 - a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;
 - b. all days during which any visible emissions of fugitive dust were observed from the transferring and conveying operations; and
 - c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.

The above information shall be provided as an attachment to the PER. If there were no day(s) and/or corrective action(s) to identify as required above, the permittee shall

indicate within the “Additional Information and Corrections” section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

(1) Compliance with the emission limitations in section b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

From loading in to the portable fiber mixer (stack emissions):

0.04ton of PE/year and 0.013 ton PM₁₀/year

Applicable Compliance Method:

The emission limitation was established by multiplying the corresponding AP-42 emission factor (EF) with the process weight rate (PWR), applying 99.9% control efficiency, multiplying by the maximum annual hours of limitation (8,760) and dividing by a conversion factor of 1 ton/2000. Provided compliance is shown with the operational restrictions, compliance with the annual limitation will be assumed.

Emission Point	PM ₁₀ EF (lbs/ton)	PWR (tons/hr)
Portable Fiber Mixer	0.04	70

b. Emission Limitation:

0.044 ton of PE/year from the pug mill (stack emissions)

Applicable Compliance Method:

The emission limitation was established by multiplying the grains/cubic foot (0.00021) by the dry standard cubic feet per minute of 5699 dscf/min, then multiplying by min/hr (60) and the conversion factor of lb/7000 grain. The annual limit is calculated by then multiplying that sum by the maximum annual hours of operation (8,760) and dividing by a conversion factor of 1 ton/2000. Provided compliance is shown with the operational restrictions, compliance with the annual limitation will be assumed.

c. Emission Limitation:

Stack emissions from the pug mill shall not exceed:

6.77 pounds of VOC/hour and 29.65 tons of VOC/year; and

0.00021 grains PE per dry standard cubic foot.

Applicable Compliance Method:

Compliance with the emission limitations were demonstrated by emission testing conducted June 28-30, 2011. If required, additionally testing shall be conducted in accordance with the following methods:

PE, Methods 1-4 and 5 of 40 CFR Part 60, Appendix A

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

The VOC pounds per hour emission rate observed during the emissions test shall be calculated in accordance with OAC paragraph 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.

The tons per year limitation was developed by multiplying the pound/hour allowable mass emissions rate by the maximum operating schedule of 8760 hours/year, and dividing by 2000 pounds/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

d. Emission Limitation:

PE shall exhibit less than 20% opacity from the pug mill

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible emission limitation in accordance with Test Method 9 as set forth in Appendix on Test Methods" in 40 CFR, Part 60 (Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

e. Emission Limitation:

Fugitive PE shall not exceed 10% opacity from the sand transfer points, 15% opacity from the aggregate transfer points and 20% opacity from the screen

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible emission limitation in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

f. Emission Limitation:

PE shall exhibit more than 10% opacity from the sand mixer

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible emission limitation in accordance with Test Method 9 as set forth in Appendix on Test Methods" in 40 CFR, Part 60 (Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

g. Emission Limitation:

Fugitive emissions from the sand screening and packaging operations shall not exceed:

2.56 tons PE per year and

1.2 tons PM₁₀ per year

Applicable Compliance Method:

The emission limitation was established by multiplying the corresponding AP-42 emission factor (EF) with the process weight rate (PWR), multiplying by the maximum annual hours of limitation (8,760) and dividing by a conversion factor of 1 ton/2000 lbs. Provided compliance is shown with the additional terms and conditions, compliance with the annual limitation will be assumed.

Emission Point	PE EF (lbs/ton)	PM ₁₀ EF (lbs/ton)	PWR (tons/hr)
Dryer to Hopper	0.0021	0.00099	70
Hopper to Screen	0.0021	0.00099	70
Screen	0.0021	0.00099	70
Screen to Hopper	0.0021	0.00099	70

h. Emission Limitation:

Fugitive emissions from the aggregate transfer points shall not exceed:

4.97 tons of fugitive PE/year

2.34 tons PM₁₀/year



Applicable Compliance Method:

The emission limitation was established by multiplying the corresponding AP-42 emission factor (EF) with the process weight rate (PWR), multiplying by the maximum annual hours of limitation (8,760) and dividing by a conversion factor of 1 ton/2000 lbs. Provided compliance is shown with the additional terms and conditions, compliance with the annual limitation will be assumed.

Emission Point	PE EF (lbs/ton)	PM ₁₀ EF (lbs/ton)	PWR (tons/hr)
Dryer to Conveyor 5	0.0021	0.00099	70
Conveyor 5 to any of the 4 storage silos	0.0021	0.00099	70
Silos to Packaging Hopper	0.0021	0.00099	100
Hopper to Packaging Conveyor	0.0021	0.00099	100
Conveyor 5 to Aggregate Storage Bin with Pug Mill	0.0021	0.00099	70
Portable Conveyor #1	0.0021	0.00099	100
Portable Conveyor #2	0.0021	0.00099	100

g) Miscellaneous Requirements

- (1) None.