



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
WARREN COUNTY**

CERTIFIED MAIL

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 14-04170

DATE: 5/6/2004

Sardinia Concrete Company
Gerald Farmer
911 U.S. Route 50
Milford, OH 45150-0000

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 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. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. 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, Ohio 43215

Sincerely,

Michael W. Ahern

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

HCDES



**Permit To Install
Terms and Conditions**

**Issue Date: 5/6/2004
Effective Date: 5/6/2004**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 14-04170

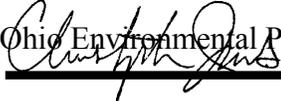
Application Number: 14-04170
APS Premise Number: 1483130384
Permit Fee: **\$0**
Name of Facility: Sardinia Concrete Company
Person to Contact: Gerald Farmer
Address: 911 U.S. Route 50
Milford, OH 45150-0000

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1622 Mason-Morrow-Millgrove Road
South Lebanon, Ohio**

Description of proposed emissions unit(s):
Administrative Modification of PTI 14-04170, issued September 5, 1996, initiated by HCDOES due to an update of the AP-42 emission factors.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.


Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions

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and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter

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3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|----------------------|
| PM | 1.50 |
| PM10 | 0.42 |

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property,
and/or Equipment

F001 - 250 TPH sand and aggregate to feed conveyor - MODIFICATION

50 TPH flyash to silo with fabric filter - MODIFICATION

50 TPH cement to silo with fabric filter - MODIFICATION

250 TPH sand and aggregate to elevated bin - MODIFICATION

| | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-11(B) |
|--------------------------------------|---------------------------|------------------------|
| <u>Applicable Rules/Requirements</u> | | |
| OAC rule 3745-31-05(A)(3) | | |
| OAC rule 3745-17-07(B)(1) | OAC rule 3745-17-07(A)(1) | |
| OAC rule 3745-17-08(B) | OAC rule 3745-17-11(B) | |
| OAC rule 3745-31-05(A)(3) | OAC rule 3745-31-05(A)(3) | |
| OAC rule 3745-17-07(B)(1) | | |
| OAC rule 3745-17-08(B) | OAC rule 3745-17-07(A)(1) | |

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PTI A

Modification Issued: 5/6/2004

Emissions Unit ID: **F001**

| <p style="text-align: center;"><u>Applicable Emissions Limitations/Control Measures</u></p> | | |
|---|---|--|
| <p>0.025 lb PM/hr, 0.0032 TPY PM 0.012 lb PM10/hr, 0.0015 TPY PM10</p> <p>Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.</p> | <p>non-Appendix A area.</p> <p>0.36 lb PM/hr, 0.029 TPY PM 0.23 lb PM10/hr, 0.018 TPY PM10</p> <p>Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.</p> | <p>average, except as specified by rule.</p> <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> |
| <p>See Terms A.2.a., A.2.b. and B.1.</p> | <p>See Terms A.2.c. and B.1.</p> | |
| <p>Exempt pursuant to the emissions unit being located in a non-Appendix A area.</p> | <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> | |
| <p>Exempt pursuant to the emissions unit being located in a non-Appendix A area.</p> | <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> | |
| <p>0.025 lb PM/hr, 0.0032 TPY PM 0.012 lb PM10/hr, 0.0015 TPY PM10</p> <p>Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.</p> | <p>1.57 lb PM/hr, 0.036 TPY PM 0.55 lb PM10/hr, 0.013 TPY PM10</p> <p>The requirements of this rule also include the compliance with the requirements of OAC rule 3745-17-07(A)(1).</p> | |
| <p>See Terms A.2.a. and B.1.</p> | | |
| <p>Exempt pursuant to the emissions unit being located in a non-Appendix A area.</p> | <p>See Terms A.2.c. and B.1.</p> | |
| <p>Exempt pursuant to the emissions unit being located in a</p> | <p>Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute</p> | |

2. Additional Terms and Conditions

- 2.a** The sand and aggregate shall have a moisture content sufficient to minimize or eliminate visible emissions of fugitive dust from the sand and aggregate feed conveyor and the sand and aggregate elevated bins.
- 2.b** The drop height of the front-end loader bucket shall be minimized in order to minimize or eliminate visible emissions of fugitive dust from the sand and aggregate.
- 2.c** The cement and flyash silo shall be adequately enclosed and vented to a fabric filter.
- 2.d** The hourly emissions limitations are based upon the emissions unit's Potential to Emit. Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.e** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the maintenance of the sand and aggregate in a moist condition, the use of enclosures and a fabric filter on the cement and flyash silos and compliance with the visible emissions limitations, the operational restriction and the emissions limitation.

B. Operational Restrictions

- 1. The maximum annual concrete production rate shall not exceed 82,000 tons per year, the maximum annual usage rate of sand and aggregate shall not exceed 64,370 tons per year, and the maximum annual usage rate of cement and flyash shall not exceed 10,250 tons per year.

C. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain monthly records of the amount of concrete produced, in tons, the amount of sand and aggregate used, in tons, and the amount of cement and flyash used, in tons.

D. Reporting Requirements

- 1. The permittee shall submit annual reports to the Hamilton County Department of Environmental Services that identify any exceedances of the annual production rate limitation or the annual material usage rate limitations, as well as the corrective actions that were taken to achieve compliance. If no exceedances occurred, the permittee shall state so in the report. The permittee shall submit the reports by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

1. Emissions Limitations

0.025 lb PM/hr, 0.0032 TPY PM from the sand and aggregate feed conveyor
 0.012 lb PM10/hr, 0.0015 TPY PM10 from the sand and aggregate feed conveyor

Applicable Compliance Methods

Compliance with the PM and PM10 emissions limitations in term A.1. for the sand and aggregate to feed conveyor shall be determined by multiplying the applicable controlled PM and PM10 emission factors from AP-42, Fifth Edition, Chapter 11.19.2, Crushed Stone Processing (January 1995), by the actual sand and aggregate to feed conveyor input rates in tons sand and aggregate per hour and tons sand and aggregate per year:

- a. actual rate (tons/hr) x EF (0.0001008 lb PM/ton) = lb PM/hr;
- b. actual rate (tons/yr) x EF (0.0001008 lb PM/ton) x ton/2000 lbs = TPY PM;
- c. actual rate (tons/hr) x EF (4.8E-05 lb PM10/ton) = lb PM10/hr; and
- d. actual rate (tons/yr) x EF (4.8E-05 lb PM10/ton) x ton/2000 lbs = TPY PM10

2. Emissions Limitations

0.025 lb PM/hr, 0.0032 TPY PM from the sand and aggregate to elevated bin
 0.012 lb PM10/hr, 0.0015 TPY PM10 from the sand and aggregate to elevated bin

Applicable Compliance Methods

Compliance with the PM and PM10 emissions limitations in term A.1. for the sand and aggregate to elevated bin shall be determined by multiplying the applicable controlled PM and PM10 emission factors from AP-42, Fifth Edition, Chapter 11.19.2, Crushed Stone Processing (January 1995), by the actual sand and aggregate to elevated bin input rates in tons sand and aggregate per hour and tons sand and aggregate per year:

- a. actual rate (tons/hr) x EF (0.0001008 lb PM/ton) = lb PM/hr;
- b. actual rate (tons/yr) x EF (0.0001008 lb PM/ton) x ton/2000 lbs = TPY PM;
- c. actual rate (tons/hr) x EF (4.8E-05 lb PM10/ton) = lb PM10/hr; and
- d. actual rate (tons/yr) x EF (4.8E-05 lb PM10/ton) x ton/2000 lbs = TPY PM10

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PTI A

Modification Issued: 5/6/2004

Emissions Unit ID: **F001**

3. Emissions Limitations

0.36 lb PM/hr, 0.029 TPY PM from cement to silo with fabric filter
 0.23 lb PM10/hr, 0.018 TPY PM10 from cement to silo with fabric filter

Applicable Compliance Methods

Compliance with the PM and PM10 emissions limitations in term A.1. for the pneumatic delivery of cement to silo shall be determined by multiplying the applicable PM and PM10 emission factors (EF) from AP-42, Fifth Edition, Chapter 11.12, Concrete Batching (October 2001), by the actual delivery loading rate in tons material per hour and tons material per year multiplied by the control efficiency (CE) for the fabric filters established in the PTI application 14-04170:

- a. actual rate (tons/hr) x EF (0.72 lb PM/ton) x CE [1 - (99%)] = lb PM/hr;
- b. actual rate (tons/yr) x EF (0.72 lb PM/ton) x CE [1 - (99%)] x ton/2000 lbs = TPY PM;
- c. actual rate (tons/hr) x EF (0.46 lb PM/ton) x CE [1 - (99%)] = lb PM10/hr; and
- d. actual rate (tons/yr) x EF (0.46 lb PM/ton) x CE [1 - (99%)] x ton/2000 lbs = TPY PM10

4. Emissions Limitations

1.57 lb PM/hr, 0.036 TPY PM from flyash to silo with fabric filter
 0.55 lb PM10/hr, 0.013 TPY PM10 flyash to silo with fabric filter

Applicable Compliance Methods

Compliance with the PM and PM10 emissions limitations in term A.1. for the pneumatic delivery of flyash to silo shall be determined by multiplying the applicable PM and PM10 emission factors from AP-42, Fifth Edition, Chapter 11.12, Concrete Batching (October 2001), by the actual delivery loading rate in tons material per hour and tons material per year multiplied by the control efficiency for the fabric filters established in the PTI application 14-04170:

- a. actual rate (tons/hr) x EF (3.14 lb PM/ton) x CE [1 - (99%)] = lb PM/hr;
- b. actual rate (tons/yr) x EF (3.14 lb PM/ton) x CE [1 - (99%)] x ton/2000 lbs = TPY PM;
- c. actual rate (tons/hr) x EF (1.10 lb PM/ton) x CE [1 - (99%)] = lb PM10/hr; and

Sardinia Concrete Company
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Emissions Unit ID: **F001**

d. $\text{actual rate (tons/yr)} \times \text{EF (1.10 lb PM/ton)} \times \text{CE [1 - (99\%)]} \times \text{ton/2000 lbs} = \text{TPY PM10}$

5. Emissions Limitations

Visible particulate emissions from any stack, except the cement silo stack, shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule

Visible particulate emissions from the cement silo stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule

Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average

Applicable Compliance Method

Compliance 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, 1996.

6. Operational Restriction

The maximum annual concrete production rate shall not exceed 82,000 tons per year, the maximum annual usage rate of sand and aggregate shall not exceed 64,370 tons per year, and the maximum annual usage rate of cement and flyash shall not exceed 10,250 tons per year.

Applicable Compliance Method

Compliance with the production limitation in term and condition B.1 shall be demonstrated by the recordkeeping requirement in term and condition C.1.

F. Miscellaneous Requirements

1. The terms and conditions in this permit shall supercede those identified in PTI 14-04170 issued on 9/5/1996.

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PTI A

Modification Issued: 5/6/2004

Emissions Unit ID: F002

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

| Operations, Property, <u>and/or Equipment</u> | |
|---|---|
| F002 - 38 TPH cement and flyash to weigh hopper with fabric filter - MODIFICATION | 300 TPH transit mix truck loading with fabric filter - MODIFICATION |
| 250 TPH sand and aggregate to weigh hopper - MODIFICATION | 250 TPH sand and aggregate to transfer conveyor - MODIFICATION |

| <u>Applicable Rules/Requirements</u> | | |
|--------------------------------------|---------------------------|------------------------|
| OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-08(B) | |
| | OAC rule 3745-31-05(A)(3) | OAC rule 3745-17-11(B) |
| OAC rule 3745-17-07(A)(1) | OAC rule 3745-17-07(B)(1) | |
| OAC rule 3745-17-11(B) | OAC rule 3745-17-08(B) | |
| | OAC rule 3745-31-05(A)(3) | |
| OAC rule 3745-31-05(A)(3) | | |
| OAC rule 3745-17-07(B)(1) | OAC rule 3745-17-07(A)(1) | |

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PTI A

Modification Issued: 5/6/2004

Emissions Unit ID: **F002**

| <p style="text-align: center;"><u>Applicable Emissions Limitations/Control Measures</u></p> | | |
|--|---|--|
| <p>0.084 lb PM/hr, 0.011 TPY PM 0.030 lb PM10/hr, 0.004 TPY PM10</p> <p>Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.</p> <p>See Terms A.2.b. and B.1.</p> | <p>non-Appendix A area.</p> <p>Exempt pursuant to the emissions unit being located in a non-Appendix A area.</p> <p>0.025 lb PM/hr, 0.0032 TPY PM 0.012 lb PM10/hr, 0.0015 TPY PM10</p> <p>Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.</p> | <p>See Terms A.2.b. and B.1.</p> <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> |
| <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> | <p>See Terms A.2.a. and B.1.</p> <p>Exempt pursuant to the emissions unit being located in a non-Appendix A area.</p> | |
| <p>The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).</p> | <p>Exempt pursuant to the emissions unit being located in a non-Appendix A area.</p> | |
| <p>1.28 lb PM/hr, 0.16 TPY PM 0.60 lb PM10/hr, 0.08 TPY PM10</p> <p>Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.</p> <p>See Terms A.2.a. and B.1.</p> <p>Exempt pursuant to the emissions unit being located in a</p> | <p>0.23 lb PM/hr, 0.031 TPY PM 0.06 lb PM10/hr, 0.0077 TPY PM10</p> <p>Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.</p> <p>Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average.</p> | |

2. Additional Terms and Conditions

- 2.a** The sand and aggregate shall have a moisture content sufficient to minimize or eliminate visible emissions of fugitive dust from the sand and aggregate to the weigh hopper and the sand and aggregate to the transfer conveyor.
- 2.b** The cement and flyash weigh hopper and transit mix truck loading shall be adequately enclosed and vented to fabric filters.
- 2.c** The hourly emissions limitations are based upon the emissions unit's Potential to Emit. Therefore, no hourly records are required to demonstrate compliance with these limits.
- 2.d** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the maintenance of the sand and aggregate in a moist condition, the use of enclosures and fabric filters on the cement and flyash weigh hopper and transit mix truck loading and compliance with the visible emissions limitations, the operational restriction and the emissions limitations.

B. Operational Restrictions

- 1. The maximum annual concrete production rate shall not exceed 82,000 tons per year, the maximum annual usage rate of sand and aggregate shall not exceed 64,370 tons per year, and the maximum annual usage rate of cement and flyash shall not exceed 10,250 tons per year.

C. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall maintain monthly records of the amount of concrete produced, in tons, the amount of sand and aggregate used, in tons, and the amount of cement and flyash used, in tons.

D. Reporting Requirements

- 1. The permittee shall submit annual reports to the Hamilton County Department of Environmental Services that identify any exceedances of the annual production rate limitation or the annual material usage rate limitations, as well as the corrective actions that were taken to achieve compliance. If no exceedances occurred, the permittee shall state so in the report. The permittee shall submit the reports by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

- 1. Emissions Limitations

0.084 lb PM/hr, 0.011 TPY PM from cement and flyash to weigh hopper

0.030 lb PM10/hr, 0.004 TPY PM10 from cement and flyash to weigh hopper

Applicable Compliance Methods

Compliance with the PM and PM10 emissions limitations in term A.1. for the cement and flyash to weigh hopper shall be determined by multiplying the applicable PM and PM10 emission factors from AP-42, Fifth Edition, Chapter 11.12, Concrete Batching (October 2001), by the actual throughput rate in tons material per hour and tons material per year multiplied by the control efficiency for the fabric filters established in the PTI application 14-04170:

- a. actual rate (tons/hr) x EF (0.22 lb PM/ton) x CE [1 - (99%)] = lb PM/hr;
- b. actual rate (tons/yr) x EF (0.22 lb PM/ton) x CE [1 - (99%)] x ton/2000 lbs = TPY PM;
- c. actual rate (tons/hr) x EF (0.078 lb PM/ton) x CE [1 - (99%)] = lb PM10/hr; and
- d. actual rate (tons/yr) x EF (0.078 lb PM/ton) x CE [1 - (99%)] x ton/2000 lbs = TPY PM10

2. Emissions Limitations

1.28 lb PM/hr, 0.16 TPY PM from sand and aggregate to weigh hopper
0.60 lb PM10/hr, 0.08 TPY PM10 from sand and aggregate to weigh hopper

Applicable Compliance Methods

Compliance with the PM and PM10 emissions limitations in term A.1. for the sand and aggregate to weigh hopper shall be determined by multiplying the applicable PM and PM10 emission factors from AP-42, Fifth Edition, Chapter 11.12, Concrete Batching (October 2001), by the actual throughput rate in tons material per hour and tons material per:

- a. actual rate (tons/hr) x EF (0.0051 lb PM/ton) = lb PM/hr;
- b. actual rate (tons/yr) x EF (0.0051 lb PM/ton) x ton/2000 lbs = TPY PM;
- c. actual rate (tons/hr) x EF (0.0024 lb PM/ton) = lb PM10/hr; and
- d. actual rate (tons/yr) x EF (0.0024 lb PM/ton) x ton/2000 lbs = TPY PM10

3. Emissions Limitations

0.025 lb PM/hr, 0.0032 TPY PM from sand and aggregate to transfer conveyor
 0.012 lb PM10/hr, 0.0015 TPY PM10 from sand and aggregate to transfer conveyor

Applicable Compliance Methods

Compliance with the PM and PM10 emissions limitations in term A.1. for the sand and aggregate to transfer conveyor shall be determined by multiplying the applicable controlled PM and PM10 emission factors from AP-42, Fifth Edition, Chapter 11.19.2, Crushed Stone Processing (January 1995), by the actual sand and aggregate to transfer conveyor input rates in tons sand and aggregate per hour and tons sand and aggregate per year:

- a. actual rate (tons/hr) x EF (0.0001008 lb PM/ton) = lb PM/hr;
- b. actual rate (tons/yr) x EF (0.0001008 lb PM/ton) x ton/2000 lbs = TPY PM;
- c. actual rate (tons/hr) x EF (4.8E-05 lb PM10/ton) = lb PM10/hr; and
- d. actual rate (tons/yr) x EF (4.8E-05 lb PM10/ton) x ton/2000 lbs = TPY PM10

4. Emissions Limitations

0.23 lb PM/hr, 0.031 TPY PM from transit mix truck loading
 0.06 lb PM10/hr, 0.0077 TPY PM10 from transit mix truck loading

Applicable Compliance Methods

Compliance with the PM and PM10 emissions limitations in term A.1. for the transit mix truck loading shall be determined by multiplying the applicable PM and PM10 emission factors from AP-42, Fifth Edition, Chapter 11.12, Concrete Batching (October 2001), by the actual throughput rate in tons material per hour and tons material per year multiplied by the control efficiency for the fabric filters established in the PTI application 14-04170:

- a. actual rate (tons/hr) x EF (0.61 lb PM/ton) x CE [1 - (99%)] = lb PM/hr;
- b. actual rate (tons/yr) x EF (0.61 lb PM/ton) x CE [1 - (99%)] x ton/2000 lbs = TPY PM;
- c. actual rate (tons/hr) x EF (0.15 lb PM/ton) x CE [1 - (99%)] = lb PM10/hr; and
- d. actual rate (tons/yr) x EF (0.15 lb PM/ton) x CE [1 - (99%)] x ton/2000 lbs = TPY PM10

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5. Emissions Limitations

Visible particulate emissions from the cement and flyash weigh hopper and transit mix truck loading stacks shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule

Visible particulate emissions of fugitive dust shall not exceed 20 percent opacity as a three-minute average

Applicable Compliance Method

Compliance 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, 1996.

6. Operational Restriction

The maximum annual concrete production rate shall not exceed 82,000 tons per year, the maximum annual usage rate of sand and aggregate shall not exceed 64,370 tons per year, and the maximum annual usage rate of cement and flyash shall not exceed 10,250 tons per year.

Applicable Compliance Method

Compliance with the production limitation in term and condition B.1 shall be demonstrated by the recordkeeping requirement in term and condition C.1.

F. Miscellaneous Requirements

1. The terms and conditions in this permit shall supercede those identified in PTI 14-04170 issued on 9/5/1996.

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

| <u>Operations, Property, and/or Equipment</u> | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u> |
|--|--------------------------------------|---|
| F003 - Sand and aggregate storage piles - MODIFICATION | OAC rule 3745-31-05(A)(3) | 1.22 TPY PM 0.29 TPY PM10 |
| | | Visible particulate emissions of fugitive dust shall not exceed 1 minute during any 60-minute observation period. |
| | | See Terms A.2.a., A.2.b. and B.1. |
| | OAC rule 3745-17-07(B)(6) | Exempt pursuant to the emissions unit being located in a non-Appendix A area. |
| | OAC rule 3745-17-08(B)(6) | Exempt pursuant to the emissions unit being located in a non-Appendix A area. |

2. Additional Terms and Conditions

- 2.a The sand and aggregate storage piles shall have a sufficient moisture content, by the periodic application of water, to minimize or eliminate visible emissions of fugitive dust.
- 2.b During the loading of the sand and aggregate onto the conveyor, the drop height of the front-end loaders shall be minimized in order to minimize or eliminate the visible emissions of fugitive dust.

- 2.c Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the maintenance of the stored material in a moist condition by the periodic application of water, minimizing the drop height of the front-end loaders and compliance with the visible emissions limitation, the operational restriction and the PM emissions limitation.

B. Operational Restrictions

1. The maximum annual storage of sand and aggregate materials shall not exceed 64,370 tons per year.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the amount of sand and aggregate stored, in tons.

D. Reporting Requirements

1. The permittee shall notify Hamilton County Department of Environmental Services in writing of any monthly record which shows an exceedance of the annual material usage limitation. The report shall include a copy of such record and shall be submitted within 30 days of the exceedance.

E. Testing Requirements

1. Emissions Limitations

1.22 TPY PM
0.29 TPY PM10

Applicable Compliance Method

Compliance with the annual PM and PM10 emissions limitations shall be demonstrated by:

- a. for material handling/drop unloading, the Emission Factors (EF) may be calculated using Equation 1 from AP-42, Fifth Edition, 1995, Aggregate Handling and Storage Piles. The EFs shall be multiplied by the actual annual material unloaded, in tons per year multiplied by the control credit for watering (0.5) and divided by 2000 lbs to equal TPY PM and PM10. The EFs shall be calculated as follows:

$$E = k(0.0032) \times ((u/5)^{1.3}/(M/2)^{1.4}) \text{ lb/ton}$$

where,

k = particle size multipliers for PM and PM10

M = material moisture content %

U = mean wind speed, mph

- b. for wind erosion, the Emission Factors (EF) may be calculated using Equation 4 from RACM document, page 2-33. The EFs shall be multiplied by the actual annual material stored, in tons per year multiplied by the control credit for watering (0.5) and divided by 2000 lbs to equal TPY PM and PM10. The EFs shall be calculated as follows:

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$$E = 0.05(S/1.5)(D/90)(d/235)(f/15) \text{ lb/ton}$$

where,

S = silt content of stored material, % by weight

D = duration of storage, days

d = dry days per year

f = percentage of time wind speed exceeds 12 MPH

2. Emissions Limitation

Visible particulate emissions of fugitive dust shall not exceed 1 minute during any 60-minute observation period

Applicable Compliance Method

Compliance 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, 1996.

3. Operational Restriction

The maximum annual storage of sand and aggregate materials shall not exceed 64,370 tons per year.

Applicable Compliance Method

Compliance with the production limitation in term and condition B.1 shall be demonstrated by the recordkeeping requirement in term and condition C.1.

F. Miscellaneous Requirements

1. The terms and conditions in this permit shall supercede those identified in PTI 14-04170 issued on 9/5/1996.