

Facility ID: 1483140150 Issuance type: Final State Permit To Operate

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In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

\*\*\*THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION\*\*\*

Facility ID: 1483140150 Emissions Unit ID: F004 Issuance type: Final State Permit To Operate

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**Part II - Special Terms and Conditions**

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

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
  - (a) None.

**A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operation(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 employed. Additional applicable emissions limitations and/or control measures (if any) may 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>
F004-Cement silos (#1A, #2W, #3G) with fabric sock filters	OAC rule 3745-31-05(A)(3) PTI 14-04242	Particulate emissions (PE) shall not exceed 0.063 pound per hour and 0.007 ton per year during cement unloading to the elevated storage silos.
		Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.022 pound per hour and 0.003 ton per year during cement unloading to the elevated storage silos.
		See Term A.2.a. See Sections B.1 and B.2.
Sand and aggregate transfer to inside elevated storage bins	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the fabric sock filter outlets shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.
	OAC rule 3745-17-11(B)	The emissions limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-31-05(A)(3) PTI 14-04242	Particulate emissions (PE) shall not exceed 0.27 pound per hour and 0.34 ton per year during transfer of sand and aggregate to the inside storage silos.
		Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.13 pound per hour and 0.16 ton per year during transfer of sand and aggregate to the inside storage silos.
		Visible particulate emissions of fugitive dust escaping the building and originating from the inside storage silos during the transfer of sand and aggregate shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
		See Term A.2.b. See Sections B.1. and B.2.
	OAC rule 3745-17-07(B)	See term A.2.c.
	OAC rule 3745-17-08(B)	See term A.2.d.

**2. Additional Terms and Conditions**

- (a) The permittee shall employ the following best available control measures for the above-identified cement silos for the purpose of ensuring compliance with the above-mentioned applicable requirements:
  - i. Cement shall be transferred pneumatically to the cement silos. The pneumatic system shall be adequately enclosed so as to eliminate at all times visible emissions of fugitive dust. Any visible emissions of cement dust emanating from the delivery vehicle during transfer shall be cause for the immediate halt of the unloading process and the refusal of the cement load until the situation is

corrected; and

ii. Each cement vent shall be adequately enclosed and vented to a fabric sock filter. The enclosure shall be sufficient so as to minimize or eliminate, at all times, visible emissions of fugitive dust at the point of capture.

The permittee shall employ the following best available control measures for the above-identified inside elevated storage bins for the purpose of ensuring compliance with the above-mentioned applicable requirements:

i. At all times during the transfer of sand and aggregate, the drop height of the front-end bucket shall be minimized to the extent possible to minimize or eliminate visible emissions of fugitive dust; and

ii. Sand and aggregate loaded into the elevated bins shall, at all times, have an inherent moisture content sufficient to minimize or eliminate visible emissions of fugitive dust.

This emission unit is exempt from the visible PE limitations specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).

This emission unit 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).

**B. Operational Restrictions**

1. The maximum annual concrete production for the concrete batch plant shall not exceed 100,000 tons per year for all components mixed.
2. The maximum annual usage of cement in the concrete batch plant shall not exceed 15,000 tons per year. The maximum annual usage of sand and aggregate materials in the concrete batch plant shall not exceed 75,000 tons per year.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall maintain annual records of:
  - a. the cubic yards or tons of concrete produced at this facility;
  - b. the tons of sand and aggregate used to produce the concrete at this facility; and
  - c. the tons of cement used to produce the concrete at this facility.

**D. Reporting Requirements**

1. The permittee shall submit annual reports to the Hamilton County Department of Environmental Services that specify the total cubic yards or total tons of concrete produced at this facility, and the total tons of sand and aggregate, and cement, used to produce the concrete at this facility. The reports shall be submitted by January 31 of each year and shall cover the previous 12-month period.

**E. Testing Requirements**

1. Compliance with the emissions limitation(s) in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):  
Emissions Limitations:  
Particulate emissions (PE) shall not exceed 0.063 pound per hour during cement unloading to the elevated storage silos

Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.022 pound per hour during cement unloading to the elevated storage silos

Applicable Compliance Methods:

Maximum throughput and calculations are based on a mix design consisting of 15% cement, 75% sand and aggregate combined, and 10% water.

Cement emission factor = 0.00099 lb of PM/ton cement (AP-42, 11.12, 10/01).

Cement emission factor = 0.00034 lb of PM10/ton cement (AP-42, 11.12, 10/01).

Truck to cement silos = 64 tons of cement/hr max. transfer rate

64 tons of cement/hr x 0.00099 lb of PE/ton cement = 0.063 lb of PE/hr.

64 tons of cement/hr x 0.00034 lb of PM10/ton cement = 0.022 lb of PM10/hr.

Emissions Limitations:

PE shall not exceed 0.007 ton per year during cement unloading to the elevated storage silos.

PM10 shall not exceed 0.003 ton per year during cement unloading to the elevated storage silos.

Applicable Compliance Methods:

Maximum throughput and calculations are based on a mix design consisting of 15% cement, 75% sand and aggregate combined, and 10% water.

Cement emission factor = 0.00099 lb of PM/ton cement (AP-42, 11.12, 10/01).

Cement emission factor = 0.00034 lb of PM10/ton cement (AP-42, 11.12, 10/01).

Truck to cement silos = 15,000 tons of cement/yr max. transfer rate

15,000 tons of cement/yr x 0.00099 lb of PE/ton cement x ton/2000 lbs = 0.007 ton of PE per year.

15,000 tons of cement/yr x 0.00034 lb of PM10/ton cement x ton/2000 lbs = 0.003 ton of PM10 per year.

Emissions Limitations:

Particulate emissions (PE) shall not exceed 0.27 pound per hour during transfer of sand and aggregate to the inside storage silos.

Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.13 pound per hour during transfer of sand and aggregate to the inside storage silos.

**Applicable Compliance Methods:**

Maximum throughput and calculations are based on a mix design consisting of 15% cement, 75% sand and aggregate combined, and 10% water.

Combined sand/aggregate emission factor = 0.009 lb of PM/ton sand/aggregate (AP-42, 11.12, 10/01).  
 Combined sand/aggregate emission factor = 0.00429 lb of PM10/ton sand/aggregate (AP-42, 11.12, 10/01).

Sand and aggregate = 30 tons of sand/aggregate/hr max. transfer rate  
 30 tons of sand/aggregate/hr x 0.009 lb of PE/ton sand/aggregate = 0.27 lb of PE/hr.  
 30 tons of sand/aggregate/hr x 0.00429 lb of PM10/ton sand/aggregate = 0.13 lb of PM10/hr.

**Emissions Limitations:**

PE shall not exceed 0.34 ton per year during transfer of sand and aggregate to the inside storage silos

PM10 shall not exceed 0.16 ton per year during transfer of sand and aggregate to the inside storage silos

Particulate matter 10 microns and less in diameter (PM10) emissions shall not exceed 0.13 pound per hour during transfer of sand and aggregate to the inside storage silos

**Applicable Compliance Methods:**

Maximum throughput and calculations are based on a mix design consisting of 15% cement, 75% sand and aggregate combined, and 10% water.

Combined sand/aggregate emission factor = 0.009 lb of PM/ton sand/aggregate (AP-42, 11.12, 10/01).  
 Combined sand/aggregate emission factor = 0.00429 lb of PM10/ton sand/aggregate (AP-42, 11.12, 10/01).

Sand and aggregate = 75,000 tons of sand/aggregate/yr max. transfer rate.  
 75,000 tons of sand/aggregate/yr x 0.009 lb of PE/ton sand/aggregate x ton/2000 lbs = 0.34 tons of PE per year.  
 75,000 tons of sand/aggregate/yr x 0.00429 lb of PM10/ton sand/aggregate x ton/2000 lbs = 0.16 tons of PM10 per year.

**Emissions Limitation:**

Visible particulate emissions from the fabric sock filter outlets shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

**Applicable Compliance Method:**

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

**Emissions Limitation:**

Visible particulate emissions of fugitive dust escaping the building and originating from the inside storage silos during the transfer of sand and aggregate shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.

**Applicable Compliance Method:**

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

**F. Miscellaneous Requirements**

1. The permittee may replace equipment, add additional equipment, or alter existing equipment as long as the change is consistent with applicable Ohio EPA guidance document(s) and does not meet the definition of "modification" or "new source" as defined in OAC rule 3745-31-01(B).