Facility ID: 1431084059 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: 1431084059 Emissions Unit ID: P901 Issuance type: Final State Permit To Operate

Go to the top of this document

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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
unloading to cement and flyash silos w/fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-04893)	1.22 lbs/hr of particulate emissions (PE) from the fabric filter 1.22 lbs/hr of particulate matter emissions with a diameter of 10 microns or less (PM10) from the fabric filter 1.02 tons per year (TPY) of PE from the fabric filter 1.02 TPY of PM10 emissions from the fabric filter See Section A.2.h below.
	OAC rule 3745-17-07(A)(1)	See Section A.2.b below.
	OAC rule 3745-17-11(B)(1)	Less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
cement, flyash, sand and aggregate weigh hopper loading w/fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-04893)	1.47 lbs/hr of PE from the fabric filter 1.47 lbs/hr of PM10 emissions from the fabric filter 1.22 TPY of PE from the fabric filter and from fugitive emissions combined 1.22 TPY of PM10 emissions from the fabric filter and from fugitive emissions combined See Sections A.2.d and A.2.g below.
	OAC rule 3745-17-07(A)(1)	See Section A.2.b below.
	OAC rule 3745-17-07(B)(1)	See Section A.2.c below.
	OAC rule 3745-17-08(B)	Same as the control measures established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	Less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
transit mix truck loading w/fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-04893)	0.87 lb/hr of PE from the fabric filter 0.87 lb/hr of PM10 emissions from the fabric filter 0.73 TPY of PE from the fabric filter and from fugitive emissions combined 0.73 TPY of PM10 emissions from the fabric filter and from fugitive emissions combined See Sections A.2.e and A.2.g below.
	OAC rule 3745-17-07(A)(1)	See Section A.2.b below.
	OAC rule 3745-17-07(B)(1)	See Section A.2.c below.
	OAC rule 3745-17-08(B)	Same as the control measures established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(1)	Less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).

sand/aggregate transfer to elevated bins	OAC rule 3745-31-05(A)(3) (PTI 14-04893)	3.23 lbs/hr of PE 3.23 lbs/hr of PM10 emissions 2.69 TPY of PE 2.69 TPY of PM10 emissions See Section A.2.a below.
	OAC rule 3745-17-07(B)(1)	See Section A.2.c below.
	OAC rule 3745-17-08(B)	Same as the control measure established in OAC rule 3745-31-05(A)(3).

2. **Additional Terms and Conditions**

(a) Sand and aggregate shall be maintained in a moist condition in order to minimize or eliminate visible emissions of fugitive dust.
Visible particulate emissions from any stack shall not exceed 20% opacity, as a six-minute average, except as specified by rule.
Visible particulate emissions of fugitive dust shall not exceed 20% opacity, as a three-minute average, except as specified by rule.
The cement/flyash/sand and aggregate weigh hopper shall be partially enclosed and vented to a fabric filter with at least a 95% control efficiency for PE and PM10 emissions.
The transit mix truck loading station shall be partially enclosed and vented to a fabric filter with at least a 95% control efficiency for PE and PM10 emissions.
The hourly PE and PM10 emission limitations specified in Section A.1 are based upon the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with these limits.
The partial enclosure and the fabric filter system shall be maintained to minimize or eliminate visible particulate emissions of fugitive dust.
PE from unloading to cement and flyash silos shall be captured and vented to a fabric filter.

B. **Operational Restrictions**

1. The maximum concrete production rate for this emissions unit shall not exceed 500,000 tons per year.

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

1. The permittee shall collect and record the following information each month for this emissions unit;

a. the amount, in tons, of concrete produced; and

b. the PE/PM10 emissions, in tons, from each of the facility operations as specified in Section A.1 (i.e., unloading to cement and flyash silos; cement, flyash, sand and aggregate weigh hopper loading; transit mix truck loading; sand/aggregate transfer to elevated bins).

2. The permittee shall collect and record the following information each calendar year for this emissions unit:

a. the total amount, in tons, of concrete produced (summation of C.1.a for all months during the calendar year); and

b. the total PE/PM10 emissions, in tons, from each of the facility operations as specified in Section A.1 (summation of C.1.b for all months during the calendar year).

3. The permittee shall maintain daily records that indicate when this emissions unit, excluding sand/aggregate transfer to elevated bins, was in operation and one or more fabric filters were not operating.

4. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from fugitive dust or from the fabric filters 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. the cause of the visible emissions;

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

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

D. **Reporting Requirements**

1. The permittee shall submit annual reports that specify the total amount of concrete produced, in tons, for the calendar year, as determined by the record keeping performed pursuant to Section C.2.a. In addition, the permittee shall submit annual reports that specify the total PE/PM10 emissions, in tons, for each of the facility operations as determined by the record keeping performed pursuant to Section C.2.b. These reports shall be submitted by January 31 of each year.

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any occurrence when this emissions unit, excluding sand/aggregate transfer to elevated bins, was in operation and one or more fabric filters were not employed, and the duration of such occurrence. This report shall be due within 30 days after such an event occurs.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible PE were observed from fugitive dust or from the fabric filters serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible PE. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. **Testing Requirements**

1. Compliance with the visible PE, PE and PM10 emission limitations and the annual concrete production limitation specified in Sections A.1, A.2 and B.1, respectively, shall be determined by the following methods:

a. Visible PE Limitation: visible PE shall not exceed 20% opacity, as a six-minute average, except as specified by rule (for any stack)

Applicable Compliance Method: Compliance with the visible PE limitation shall be determined by the method specified in 40 CFR, Part 60, Appendix A, Test Method 9 pursuant to OAC rule 3745-17-03(B)(1).

b. Visible PE Limitation: visible PE shall not exceed 20% opacity, as a three-minute average, except as specified by rule (fugitive dust)

Applicable Compliance Method: Compliance with the visible PE limitation shall be determined by the method specified in OAC rule 3745-17-03(B)(3).
c. PE and PM10 Emission Limitations: 1.22 lbs/hr of PE/PM10 emissions from the fabric filter and 1.02 TPY of PE/PM10 emissions from the fabric filter plus fugitive dust for unloading to cement/flyash silos; 1.47 lbs/hr of PE/PM10 emissions from the fabric filter and 1.22 TPY of PE/PM10 emissions from the fabric filter plus fugitive dust for cement, flyash, sand and aggregate weigh hopper loading; 0.87 lb/hr of PE/PM10 emissions from the fabric filter and 0.73 TPY of PE/PM10 emissions from the fabric filter plus fugitive dust for transit mix truck loading; 3.23 lbs/hr and 2.69 TPY of PE/PM10 emissions for sand/aggregate transfer to elevated bins

Applicable Compliance Method:

Compliance with the hourly PE/PM10 emission limitations shall be determined by the following:

i. lbs/hr of PE/PM10 emissions (for stack emissions) = (the maximum hourly loading rate of the material, in tons) x (the appropriate emission factor(s), in lbs of PE/PM10 emissions/ton of material mixed, as specified in AP-42, 5th Edition, Chapter 11, Table 11.12-2) x (fractional capture efficiency) x (one minus the fractional control efficiency (0.95) of the control equipment), where the fractional capture efficiencies are 1.0 for unloading to cement and flyash silos and 0.9 for the cement, flyash, sand and aggregate weigh hopper loading and the transit mix truck loading, or, if requested, by testing using Methods 1 through 5 of 40 CFR, Part 60, Appendix A; and
ii. lbs/hr of PE/PM10 emissions (for fugitive dust emissions from sand/aggregate transfer to the elevated bins) = (the maximum hourly loading rate of the material, in tons) x (emission factor, in lbs of PE/PM10 emissions/ton of material mixed, as specified in AP-42, 5th Edition, Chapter 11, Table 11.12-2) x (one minus the fractional control efficiency (0.50) of the control measure).

Compliance with the annual PE/PM10 emission limitations shall be determined by the following equation for each part of the emissions unit:

TPY of PE/PM10 emissions (for stack emissions) = [(tons of material mixed per year) x (the appropriate emission factor(s), in lbs of PE/PM10 emissions/ton of material mixed) x [(one minus the fractional control efficiency) x (one minus the fractional capture efficiency of the control equipment)] and divided by 2,000 lbs/ton], where the fractional capture efficiencies are 1.0 for unloading to cement and flyash silos and 0.90 for the cement, flyash, sand and aggregate weigh hopper loading, and transit mix truck loading, and the fractional control efficiency is 0.95 for stack emissions.
TPY of PE/PM10 emissions (for fugitive emissions) = [(tons of material mixed per year) x (the appropriate emission factor(s), in lbs of PE/PM10 emissions/ton of material mixed) x [(one minus the fractional control efficiency) x (one minus the fractional capture efficiency of the control measure)] and divided by 2,000 lbs/ton], where the fractional capture efficiencies are 1.0 for the cement and flyash silos and 0.9 for the cement, flyash, sand and aggregate weigh hopper loading and the transit mix truck loading, and 0.0 for the sand/aggregate transfer to elevated bins, and the fractional control efficiencies are 0.50 for the sand/aggregate transfer to elevated bins and 0.0 for all other emission points.

d. Concrete Production Limitation: 500,000 tons per year of concrete

Applicable Compliance Method: Compliance with the annual concrete production limitation shall be determined by the record keeping specified in Section C.2.

F. **Miscellaneous Requirements**

1. None