

**GENERAL PERMIT 4.1 TEMPLATE
TRUCK MIX READY MIX CONCRETE BATCH PLANT**

C. Emissions Unit Terms and Conditions

Note: The following are the terms and conditions for a General PTIO to be issued to a non-Title V facility

1. **[Emissions Unit ID], [Company Equipment ID]**

Operations, Property and/or Equipment Description:

[DAPC Description]

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

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

a. None.

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

a. 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
<i>(Transfer of Sand and Aggregate to Elevated Bins)</i>		
a.	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 2.85 tons/yr. Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average. 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. 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.

b.	OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)	See b)(2)a.
<i>(Portland Cement, Fly Ash and Slag Silos)</i>		
c.	OAC rule 3745-31-05(A)(3)	PE shall not exceed 0.18 ton/yr. Each fabric filter(s) serving a silo shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet(s). See b)(2)c.
d.	OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)	See b)(2)a.
e.	OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)	See b)(2)b.
<i>(Weigh Hopper Loading of Cement, Fly Ash, Slag, and possibly Sand and Aggregate)</i>		
f.	OAC rule 3745-31-05(A)(3)	PE shall not exceed 1.02 tons/yr. The fabric filter serving the weigh hopper shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet. See b)(2)d.
g.	OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)	See b)(2)a.
h.	OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)	See b)(2)b.
<i>(Truck Loading of Aggregate, Sand, Cement and Cement Supplement)</i>		
i.	OAC rule 3745-31-05(A)(3)	PE shall not exceed 7.35 tons/yr. Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-

		<p>minute average.</p> <p>The fabric filter serving truck loading shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet.</p> <p>See b)(2)e.</p>
j.	OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)	See b)(2)a.
k.	OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)	See b)(2)b.

(2) Additional Terms and Conditions

- a. For facilities in Appendix A areas as defined in OAC rule 3745-17-08(D), the requirements established pursuant to OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B) are equivalent to or less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
- b. The requirements established pursuant to OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
- c. The permittee shall employ the following best available control measures for the above-identified cement and cement supplement silos for the purpose of ensuring compliance with the above-mentioned applicable requirements:
 - i. Cement and cement supplement shall be transferred pneumatically to the cement and cement supplement 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 and/or cement supplement 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 and/or cement supplement load until the situation is corrected.
 - ii. Each cement and cement supplement silo vent shall be adequately enclosed and vented to a fabric filter. The enclosure shall be sufficient so as to eliminate at all times visible emissions of fugitive dust at the point of capture.
- d. The permittee shall employ the following best available control measures for the above-identified weigh hoppers for the purpose of ensuring compliance with the above-mentioned applicable requirements:

- i. The weigh hoppers shall be sufficiently enclosed so as to minimize or eliminate at all times visible emissions of fugitive dust.
 - ii. The transfer of cement/cement supplement/sand/aggregate to the concrete batching weigh hoppers shall be enclosed and vented to a fabric 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.
- e. The permittee shall employ the following best available control measures for the above-identified truck mix loading process for the purpose of ensuring compliance with the above-mentioned applicable requirements:

The permittee shall install and employ a fabric filter dust collection system for the purpose of controlling fugitive dust emissions from the truck mix loading process. The fabric filter dust collection system shall be installed and operational prior to initial start-up of this facility. The control system shall be operated at all times that trucks are being loaded and shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point of capture.

c) Operational Restrictions

- (1) The maximum hourly production rate for this truck mix concrete facility shall not exceed 200 cubic yards of concrete (400 tons) per hour.
- (2) The maximum annual production rate for this truck mix concrete facility shall not exceed 250,000 cubic yards of concrete (500,000 tons) per year.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall maintain annual records of the cubic yards or tons of concrete produced at this facility.
- (2) The permittee shall perform weekly checks, when the emissions unit is in operation, and when the weather conditions allow, for any visible particulate emissions from the fabric filters serving this emissions unit. No inspections are required on days the material handling operations are not in operation. The presence or absence of any visible particulate emissions shall be recorded electronically or in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
 - a. the total duration of any visible emission incident; and
 - b. any corrective actions taken to eliminate the visible emissions.

The information above shall be kept separately for each fabric filter serving this emissions unit.

- (3) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from each sand and/or aggregate transfer point and truck loading serving this emissions unit. No inspections are required on days the material handling operations are not in operation. The presence or absence of any visible emissions shall be noted in an

operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:

- a. whether the emissions are representative of normal operations;
- b. if the emissions are not representative of normal operations, the cause of the visible emissions;
- c. the total duration of any visible emission incident; and
- d. any corrective actions taken to eliminate the visible emissions.

The information above shall be kept separately for each sand and/or aggregate transfer point and truck loading serving this emissions unit.

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director 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.

f) Testing Requirements

- (1) Compliance with the emission limitation(s) in b)(1) shall be determined in accordance with the following method(s):

a. Emission Limitation:

Each fabric filter shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance by emission testing in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

- b. Transfer of Sand and Aggregate to Elevated Bins Emission Limitation: PE shall not exceed 2.85 tons/yr.

Maximum throughput and calculations are based on a mix design consisting of 44% aggregate, 36% sand, 7% cement, 7% cement supplement (slag/fly ash) and 6% water.

Aggregate emission factor = 0.0069 lb PE/ton (AP-42, 11.12, 10/01)

Sand emission factor = 0.0021 lb PE/ton (AP-42, 11.12, 10/01)

Aggregate feed hopper loading = 220,000 tons/yr max transfer rate
220,000 tons/yr x 0.0069 lb/ton x ton/2000 lbs = 0.76 ton PE/yr

Aggregate feed hopper to conveyor = 220,000 tons/yr max transfer rate
 $220,000 \text{ tons/yr} \times 0.0069 \text{ lb/ton} \times \text{ton}/2000 \text{ lbs} = 0.76 \text{ ton PE/yr}$
Aggregate conveyor to bin = 220,000 tons/yr max transfer rate
 $220,000 \text{ tons/yr} \times 0.0069 \text{ lb/ton} \times \text{ton}/2000 \text{ lbs} = 0.76 \text{ ton PE/yr}$
Sand feed hopper loading = 180,000 tons/yr max transfer rate
 $180,000 \text{ tons/yr} \times 0.0021 \text{ lb/ton} \times \text{ton}/2000 \text{ lbs} = 0.19 \text{ ton PE/yr}$
Sand feed hopper to conveyor = 180,000 tons/yr max transfer rate
 $180,000 \text{ tons/yr} \times 0.0021 \text{ lb/ton} \times \text{ton}/2000 \text{ lbs} = 0.19 \text{ ton PE/yr}$
Sand conveyor to bin = 180,000 tons/yr max transfer rate
 $180,000 \text{ tons/yr} \times 0.0021 \text{ lb/ton} \times \text{ton}/2000 \text{ lbs} = 0.19 \text{ ton PE/yr}$

Aggregate & sand transfer total = 2.85 tons PE/yr

- c. Portland Cement, Fly Ash and Slag Silos Emission Limitation: PE shall not exceed 0.18 ton/yr.

Maximum throughput and calculations are based on a mix design consisting of 44% aggregate, 36% sand, 7% cement, 7% cement supplement (slag/fly ash) and 6% water.

Cement emission factor = 0.00099 lb PE/ton (AP-42, 11.12, 10/01)
Supplement emission factor = 0.0089 lb PE/ton (AP-42, 11.12, 10/01)

Truck to cement silo = 35,000 tons/yr max transfer rate
 $35,000 \text{ tons/yr} \times 0.00099 \text{ lb/ton} \times \text{ton}/2000 \text{ lbs} = 0.02 \text{ ton PE/yr}$
Truck to cement sup silo = 35,000 tons/yr max transfer rate
 $35,000 \text{ tons/yr} \times 0.0089 \text{ lbs/ton} \times \text{ton}/2000 \text{ lbs} = 0.16 \text{ ton PE/yr}$

Cement & cement supplement unloading total = 0.18 ton PE/yr

- d. Weigh Hopper Loading of Cement, Fly Ash, Slag, and possibly Sand and Aggregate Emission Limitation: PE shall not exceed 1.02 tons/yr.

Maximum throughput and calculations are based on a mix design consisting of 44% aggregate, 36% sand, 7% cement, 7% cement supplement (slag/fly ash) and 6% water.

Emission factor = 0.0051 lb PE/ton (AP-42, 11.12, 10/01)

Bins to weigh hopper = 400,000 tons/yr max transfer rate
 $400,000 \text{ tons/yr} \times 0.0051 \text{ lb/ton} \times \text{ton}/2000 \text{ lbs} = 1.02 \text{ tons PE/yr}$

Weigh hopper loading total = 1.02 tons PE/yr

- e. Truck Loading of Aggregate, Sand, Cement and Cement Supplement Emission Limitation: PE shall not exceed 7.35 ton/yr.

Emission factor = 0.21 lb PE/ton (AP-42, 11.12, 10/01)

Weigh hopper to truck = 70,000 tons/yr max transfer rate

$70,000 \text{ tons/yr} \times 0.21 \text{ lb/ton} \times \text{ton}/2000 \text{ lbs} = 7.35 \text{ tons PE/yr}$

Truck loading total = 7.35 tons PE/yr

f. Emission Limitation:

Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the material handling operation(s) identified above shall be determined in accordance with Test Method 9 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, 1997.

g. Emission Limitation:

There shall be no visible particulate emissions from the fabric filters serving this emissions unit.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the material handling operation(s) identified above shall be determined in accordance with Test Method 22 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, 1997.

g) 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).

(2) For permittees who qualify as a portable source as defined in OAC rule 3745-31-01, the permittee is subject to the following terms and conditions:

Pursuant to OAC rule 3745-31-03(A)(1)(p), the permittee of a portable source may relocate within the State of Ohio without first obtaining a permit to install (PTI) providing certain criteria are met. The portable source shall meet one of the two following scenarios in order to qualify for this PTI exemption for the new location:

a. The following determinations have been documented, pursuant to OAC rule 3745-31-03(A)(1)(p)(i):

i. the portable source is equipped with the best available technology for such portable source;

ii. the portable source is operating pursuant to a currently effective permit to operate (PTO) or registration status;

iii. the applicant has provided proper notice of intent to relocate the portable source to the permitting Ohio EPA District Office or local air agency, and the appropriate field office having jurisdiction over the new site within a minimum of 30 days prior to the scheduled relocation; and

- iv. in permitting Ohio EPA District Office or local air agency, and the appropriate field office's (having jurisdiction over the new site) judgment, the proposed site is acceptable under OAC rule 3745-15-07.

- b. In the alternative, pursuant to OAC rule 3745-31-03(A)(1)(p)(ii), the permittee of a portable source may relocate within the State of Ohio without first obtaining a PTI, providing the following criteria of OAC rule 3745-31-05(E) are met:
 - i. the portable source permittee possesses an Ohio EPA PTI, PTO or registration status;
 - ii. the portable source is equipped with best available technology;
 - iii. the portable source owner has identified the proposed site to Ohio EPA;
 - iv. Ohio EPA has determined that the portable source, at the proposed site, will have an acceptable environmental impact;
 - v. a public notice, consistent with OAC Chapter 3745-47, is published in the county where the proposed site is located;
 - vi. the owner of the proposed site has provided the portable source owner with approval or equivalent declaration that it is acceptable to the site owner to move the portable source to this proposed site; and
 - vii. the portable source owner has provided Ohio EPA with 15 days written notice of the relocation.

Any site approvals issued by the Ohio EPA, pursuant to OAC rule 3745-31-03(A)(1)(p)(ii), shall be valid for no longer than 3 years and are subject to renewal.

In order for the permitting Ohio EPA District Office or local air agency, and the appropriate field office having jurisdiction over the new site to determine compliance with all of the above criteria, the permittee of the portable source must file a " Notice of Intent to Relocate", within the specified time frame (30 or 15 days) prior to the relocation of the source with permitting Ohio EPA District Office or local air agency, and the appropriate field office having jurisdiction over the new site. Upon receipt of the notice, permitting Ohio EPA District Office or local air agency, and appropriate field office having jurisdiction over the new site, will evaluate the request in accordance with the above criteria.

Failure to submit said notification and to receive Ohio EPA approval prior to relocation of the source may result in fines and civil penalties.

Pursuant to OAC rule 3745-31-05(F), the Director may modify the site approval to add or delete certain portable sources or add or delete certain terms and conditions as appropriate.