AIR EMISSIONS SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for Del Mar Concrete located in Marion County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table below. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

OHIO EPA E.U. NUMBER	EMISSIONS UNIT IDENTIFICATION DESCRIPTION	BAT DETERMINATION
P901	400 tons/hr capacity concrete batch plant	Use of 3 baghouses, use of Reasonably Available Control Methods (RACM) and compliance with the terms and conditions of this permit
F001	Facility Roadways and Parking Areas	
F002	Material Storage Piles	

				transfer to bins: 5.01 TPY fugitive PE, 20% opacity as a 3-minute average
	APPLICABLE FEDERAL & OAC RULES		**PERMIT ALLOWABLE MASS EMISSIONS OR CONTROL & USAGE REQUIREMENTS**	(See AST&C's)
		3745-17-11 (B)		(*)
	3745-31-05		cement and fly ash	
		3745-17-07 (A)	unloading to 2 storage silo: 0.02 gr/dscf, 0.15 lb Particulate	(*)
		3745-31-05	Emissions (PE)/hr, 0.3 TPY PE, 0% opacity, as a 6-minute average from silo baghouse exhaust stack; 0.41 TPY fugitive PE, Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average	2.39 TPY fugitive PE, no visible emissions except for a period of time not to exceed 3 minutes during any 60-minute observation period from unpaved roadways; no visible emissions except for a period of time not to exceed 1 minute during any 60-minute observation period from paved roadways.
Use of RACM and compliance with the terms and conditions of this permit			cement and fly ash hopper: 0.02 gr/dscf, 0.003 lb PE/hr, 0.006 TPY PE, 0% opacity, as a 6-minute average from cement and fly ash hopper baghouse exhaust stack; 0.015 TPY fugitive PE, Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average	
		3745-31-05		0.55 TPY fugitive PE, no visible emissions except for a period of time not to exceed 1 minute during any 60-minute observation period.
			aggregate hopper: 3.25 TPY fugitive PE, 20% opacity as a 3-minute average	
Use of RACM and compliance with the terms and conditions of this permit			transit mix truck loading: 0.02 gr/dscf, 1.06 lbs PE/hr, 2.13 TPY PE, 0% opacity as 6-minute average from transit mix truck loading baghouse exhaust stack; 3.9 TPY fugitive PE, Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average	
			sand and aggregate	

* The emissions limitations based on this applicable rule are less stringent than the limitations established pursuant to OAC Rule 3745-31-05.

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons/Year
PE	17.96

Del Mar Concrete
Application No. 03-13058

ADDITIONAL SPECIAL TERMS AND CONDITIONS

A. APPLICABLE EMISSION LIMITATIONS AND/OR CONTROL REQUIREMENTS

1. Concrete batch plant, emissions unit P901:

   a. Cement and fly ash unloading to storage silos:

      i. Both silos shall be adequately enclosed and vented to a fabric filter. The enclosure shall be sufficient to eliminate visible emissions of fugitive particulate matter at the point of capture.

      ii. The fabric filter shall achieve an outlet emission rate of not greater than 0.02 grains of particulate matter emissions per dry standard cubic foot of exhaust gases. This equates to a particulate matter emission limitation from the baghouse outlet of 0.15 pound/hour and 0.3 ton/year. The visible emissions of particluate matter shall not exceed 0 percent opacity, as a six-minute average, from the outlet.

      iii. Fugitive particulate matter emissions from the cement and fly ash silos shall be limited to 0.41 tons/year. The visible emissions of fugitive particulate matter shall not exceed 20 percent opacity as a 3-minute average.

   b. Weigh hopper loading of cement and fly ash, sand and aggregate:

      i. The cement and fly ash weigh hopper shall be adequately enclosed and vented to a fabric filter. The enclosure shall be sufficient to eliminate visible emissions of fugitive particulate matter at the point of capture.

      ii. The fabric filter shall achieve an outlet emission rate of not greater than 0.02 grains of particulate matter emissions per dry standard cubic foot of exhaust gases. This equates to a particulate matter emission limitation from the baghouse outlet of 0.003 pound/hour and 0.006 ton/year. The visible emissions of particluate matter shall not exceed 0 percent opacity, as a six-minute average, from the outlet.

      iii. Fugitive particulate matter emissions from the cement and

fly ash weigh hopper shall be limited to 0.015 tons/year. The visible emissions of fugitive particulate matter shall not exceed 20 percent opacity as a 3-minute average.

iv. Fugitive particulate matter emissions from the aggregate hopper shall be limited to 3.25 tons/year. The visible emissions of fugitive particulate matter shall not exceed 20 percent opacity as a 3-minute average.

v. The aggregate loaded into the aggregate hopper shall have a moisture content sufficient to minimize or eliminate visible emissions of fugitive particulate matter from the conveyor and transfer point to bins.

c. Loading of Transit-Mix Truck:

i. The loading of transit mix trucks shall be adequately enclosed and vented to a fabric filter. The enclosure shall be sufficient to eliminate visible emissions of fugitive particulate matter at the point of capture.

ii. The fabric filter shall achieve an outlet emission rate of not greater than 0.02 grains of particulate matter emissions per dry standard cubic foot of exhaust gases. This equates to a particulate matter emission limitation from the baghouse outlet of 1.06 pound/hour and 2.13 ton/year. The visible emissions of particluate matter shall not exceed 0 percent opacity, as a six-minute average, from the outlet.

iii. Fugitive particulate matter emissions from the loading of transit mix trucks shall be limited to 3.9 tons/year. The visible emissions of fugitive particulate matter shall not exceed 20 percent opacity as a 3-minute average.

iv. A charging boot shall be used around the hopper choke-feed discharge area and transit-mix truck opening. The charging boot shall have a control efficiency sufficient to minimize or eliminate visible emissions of fugitive dust to the extent possible with good engineering design.

d. Sand and aggregate transfer to elevated bins:

i. Fugitive particulate matter emissions shall be limited to 5.01 tons/yr. The visible emissions of fugitive particulate matter emissions shall not exceed 20 percent opacity as a 3-minute

average.

ii. The drop height of the front-end loader bucket shall be minimized to the extent possible in order to minimize or eliminate visible emissions of fugitive particulate matter from the conveyor loading area.

iii. The sand and aggregate loaded into the elevated bins shall have a moisture content sufficient to minimize or eliminate visible emissions of fugitive particulate matter from the conveyor and transfer point to bins.

2. Roadways and parking areas, emissions unit F001:

a. Fugitive particulate matter emissions from the plant's roadways and parking areas shall be limited to 2.39 tons/year.

i. Unpaved roadways and parking areas:

(a) There shall be no visible fugitive particulate matter emissions from any unpaved roadway or parking area except for a period of time not to exceed 3 minutes during any 60-minute observation period.

(b) The permittee shall apply dust suppressants to the unpaved roadways and parking areas to minimize or eliminate, at all times, visible emissions of fugitive dust generated by vehicular traffic. Calcium chloride and/or water shall be used as the dust suppressants, and the following equipment shall be used for the periodic applications: transit mix-truck and/or hose/sprinkler system. The dust suppressant shall be applied to the unpaved surfaces, at a minimum, 3 times per week. This term and condition shall be waived during wet conditions when there is sufficient moisture to prevent visible emissions of fugitive dust.

(c) Any material carried off of the permittee’s property and deposited onto public streets by vehicular traffic or by erosion by water, etc., shall be promptly removed and disposed of

properly to minimize or prevent resuspension.

(d) A maximum speed limit of 15 miles per hour shall be posted and enforced on the property.

(e) Open bodied vehicles transporting materials likely to become airborne shall be covered at all times.

3. Sand and aggregate storage piles, emissions unit F002:

a. Fugitive particulate matter emissions from the plant's material storage piles shall be limited to 0.55 tons/year.

b. There shall be no visible emissions of fugitive particulate matter from any material storage pile except for a period of time not to exceed 1 minute during any 60-minute observation period.

c. The aggregate shall have a minimum moisture content sufficient to minimize the emissions of fugitive dust from wind erosion, load-in, and load-out of the storage piles.

B. OPERATIONAL RESTRICTIONS

1. The maximum annual operating hours for the concrete batch plant, emissions unit P901, shall not exceed 4000 hours.

C. MONITORING AND/OR RECORDKEEPING REQUIREMENTS

1. The permittee shall maintain monthly records of the operating hours for the concrete batch plant, emissions unit P901.

2. The permittee shall perform daily checks for any visible particulate matter emissions from the fabric filter control systems for the cement and fly ash silo, the cement and fly ash weigh hopper, and the transit mix truck loading, while the silo, weigh hopper and transit mix truck loading are in operation. The presence or absence of any visible emissions from each fabric filter control system shall be noted in an operations log. If any visible emissions are observed from either system, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

3. The permittee shall maintain records which include the following

information for the unpaved roadways and parking areas:

a. The date dust suppressants were applied to the unpaved surfaces.

b. The portions of unpaved surfaces that were treated with dust suppressants.

c. The application rate of calcium chloride or water (gallons per square yard).

4. 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, if a strip-chart recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

D. REPORTING REQUIREMENTS

1. The permittee shall submit annual written reports for emissions units P901, F001, and F002 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 an annual report, which states that no deviations occurred during that quarter. The reports shall be submitted annually, i.e., by January 31 of each year and shall cover the previous calendar year. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

E. TESTING REQUIREMENTS/COMPLIANCE METHOD DETERMINATIONS

1. Compliance with the emission limitations listed in the Air Emission Summary of this PTI for emission unit P901 shall be determined in accordance with the following methods:

a. <u>Emission Limitation- Cement and fly ash unloading to elevated silos:</u>

i. 0.02 grains/dscf (equates to 0.15 lb PE/hr, 0.3 TPY PE at 4000 hrs/yr) from the baghouse

ii. 0% opacity as a 6-minute average

iii. 0.41 TPY fugitive PE

iv. 20% opacity as a 3-minute average

Applicable Compliance Method: The 0.02 grains/dry standard cubic foot limit is the manufacturer's guaranteed outlet grain loading concentration. The lbs/hr and tons/yr limits are derived from it utilizing the fabric filter's volume and the emissions unit's maximum operating schedule of 4000 hrs/yr. If required, compliance with the mass emission limitation shall be based on stack testing using the methods and procedures specified in USEPA Method 5. Compliance with the visible emission limitation shall be determined by visible emissions evaluations performed using the methods and procedures specified in USEPA Method 9. Compliance with the fugitive emission limitation can be shown with the AP-42 emission factors, Table 11.12-2 (revised 10/86) to calculate the actual rate of fugitive emissions. Compliance with the fugitive visible emission limitation shall be determined by visible emissions evaluations performed using the methods and procedures specified in USEPA Method 9.

b. Emission Limitation: Weigh hopper loading- cement and fly ash hopper:

i. 0.02 grains/dscf (equates to 0.003 lb PE/hr, 0.006 TPY PE at 4000 hrs/yr) from the baghouse

ii. 0% opacity as a 6-minute average

iii. 0.015 TPY fugitive PE

iv. 20% opacity as a 3-minute average

Applicable Compliance Method: The 0.02 grains/dry standard cubic foot limit is the manufacturer's guaranteed outlet grain loading concentration. The lbs/hr and tons/yr limits are derived from it utilizing the fabric filter's volume and the emissions unit's maximum operating schedule of 4000 hrs/yr. If required, compliance with the mass emission limitation shall be based on stack testing using the

methods and procedures specified in USEPA Method 5. Compliance with the visible emission limitation shall be determined by visible emissions evaluations performed using the methods and procedures specified in USEPA Method 9. Compliance with the fugitive emission limitation can be shown with the AP-42 emission factors, Table 11.12-2 (revised 10/86) to calculate the actual rate of fugitive emissions. Compliance with the fugitive visible emission limitation shall be determined by visible emissions evaluations performed using the methods and procedures specified in USEPA Method 9.

c. Emission Limitation: Weigh hopper loading- aggregate hopper:

i. 3.25 TPY fugitive PE

ii. 20% opacity as a 3-minute average

Applicable Compliance Method: Compliance with the emission limitation can be shown with the AP-42 emission factors, Table 11.12-2 (revised 10/86) to calculate the actual rate of fugitive emissions. Compliance with the visible emission limitation shall be determined by visible emissions evaluations performed using the methods and procedures specified in USEPA Method 9.

d. Emission Limitation: Transit mix truck loading:

i. 0.02 grains/dscf (equates to 1.06 lb PE/hr, 2.13 TPY PE at 4000 hrs/yr) from the baghouse

ii. 0% opacity as a 6-minute average

iii. 3.9 TPY fugitive PE

iv. 20% opacity as a 3-minute average

Applicable Compliance Method: The 0.02 grains/dry standard cubic foot limit is the manufacturer's guaranteed outlet grain loading concentration. The lbs/hr and tons/yr limits are derived from it utilizing the fabric filter's volume and the emissions unit's maximum operating schedule of 4000 hrs/yr. If required, compliance with the mass emission limitation shall be based on stack testing using the methods and procedures specified in USEPA Method 5. Compliance with the visible emission limitation shall be determined by visible emissions evaluations performed using the methods and

procedures specified in USEPA Method 9. Compliance with the fugitive emission limitation can be shown with the AP-42 emission factors, Table 11.12-2 (revised 10/86) to calculate the actual rate of fugitive emissions. Compliance with the fugitive visible emission limitation shall be determined by visible emissions evaluations performed using the methods and procedures specified in USEPA Method 9.

e. Emission Limitation: Sand and aggregate transfer to elevated bins:

i. 5.01 TPY PE

ii. 20% opacity as a 3-minute average

Applicable Compliance Method: Compliance with the emission limitation can be shown with the AP-42 emission factors, Table 11.12-2 (revised 10/86) to calculate the actual rate of fugitive emissions. Compliance shall be determined by visible emissions evaluations performed using the methods and procedures specified in USEPA Method 9.

2. Compliance with the emission limitations listed in the Air Emission Summary of this PTI for emission unit F001 shall be determined in accordance with the following methods:

a. Emission Limitation: 2.39 tons of fugitive particulate matter per year from the roadways and parking areas

Applicable Compliance Method: Compliance with the emission limitations shall be shown with the AP-42 emission factors, section 13.2.2 (revised 1/95) to calculate the actual rate of fugitive emissions.

b. Emission Limitation- Unpaved roadways and parking areas: No visible emissions except for a period of time not to exceed 3 minutes during any sixty-minute observation period.

Applicable Compliance Method: Compliance shall be determined by visible emissions evaluations performed using the methods and procedures specified in USEPA Method 22.

3. Compliance with the emission limitations listed in the Air Emission Summary of this PTI for emission unit F002 shall be determined in accordance with the following methods:

a. Emission Limitation: 0.55 tons of fugitive particulate matter emissions per year from the storage piles

Applicable Compliance Method: Compliance with the emission limitations shall be shown with the AP-42 emission factors, section 13.2.4 (revised 1/95) to calculate the actual rate of fugitive emissions.

b. Emission Limitation: No visible emissions except for a period of time not to exceed 1 minutes during any sixty-minute observation period.

Applicable Compliance Method: Compliance shall be determined by visible emissions evaluations performed using the methods and procedures specified in USEPA Method 22.

Note: No term or condition specifying a method for demonstrating compliance with any emission limitation or other requirement of this permit shall preclude the use by any person of any credible evidence to establish compliance with or a violation of this permit, the Clean Air Act, or any implementing regulations or rules promulgated thereunder.

F. MISCELLANEOUS REQUIREMENTS

None