

GENERAL PERMIT 8.1 TEMPLATE

MINERAL EXTRACTION

Appendix A and Non-Appendix A areas

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.

Operations, Property, and/or Equipment - (F00X) - mineral extraction including overburden removal, soil removal, overburden replacement, overburden loading, mineral loading, bulldozing, blasting, drilling and grading

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	22.19 tons of fugitive PM10 per year; See b)(2)d. Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average from mineral extraction activities; see b)(2)c.
b.	OAC rule 3745-17-07(B) and OAC rule 3745-17-03(B)(3) (applicable only if this emissions unit is located in an area identified in Appendix A of OAC rule 3745-17-08)	The emission limitation specified by this rule is equivalent to the emission limitation established pursuant to ORC rule 3704.03(T); See b)(2) e.

c.	OAC rule 3745-17-08(B) (applicable only if this emissions unit is located in an area identified in Appendix A of OAC rule 3745-17-08)	(See b)(2)a. and b)(2)b.)
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(2) Additional Terms and Conditions

- a. The permittee has committed to employ the following control measures for this emissions unit for purposes of ensuring compliance with the above-mentioned applicable requirements:

Mineral Extraction Operation	Control Measure(s) *
overburden removal	minimize area of disturbed land surface; reclaim land surface as expeditiously as possible; maintenance of inherent moisture content with water truck
soil removal by truck	minimize area of land disturbance, water application as necessary
overburden replacement	reclamation/vegetation practices; water application as necessary
overburden loading	prevent haul vehicle overloading, maintain low drop height from front end loader bucket
mineral loading	prevent haul vehicle overloading, maintain low drop height from front end loader bucket
blasting	minimize area to be blasted and prevention of overshooting
drilling	use of a drill rig to control emissions
bulldozing	reclamation/vegetation practices; water application as necessary
grading	reclamation/vegetation practices; water application as necessary

* If at any time the moisture content is not sufficient to meet the above applicable requirements, the permittee shall apply water to the area before conducting operations. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- b. For each mineral extraction operation, the above-identified control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measures(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measures(s) shall continue during the mineral extraction operation(s) until further observation confirms that use of the control measure(s) is unnecessary.
- c. Visible particulate emissions shall not exceed 20% opacity as a 3-minute average from the following mineral extraction operations: overburden removal, soil removal, overburden replacement, overburden loading, mineral loading, drilling, bulldozing, and grading.
- d. The BAT requirements under ORC 3704.03(T) have been determined to be compliance with the ton per year limit and visible emission restrictions contained in b(1) a.
- e. It should be noted that blasting at a mineral extraction facility is exempt from the opacity restriction per OAC rule 3734-17-07(B)(11).

c) Operational Restrictions

- (1) The permittee shall not exceed the operational restrictions:

<u>Operations</u>	<u>Throughput (TPY unless noted otherwise)</u>
a. Drilling	8000 holes/yr
b. Blasting	150 blasts/yr
c. Overburden removal	500,000
d. Soil removal	1000 miles/yr
e. Overburden replacement	500,000
f. Overburden loading	500,000
g. Mineral loading	3,000,000
h. Bulldozing	1000 hrs/yr
i. Grading	1000 miles/yr

d) Monitoring and/or Recordkeeping Requirements

- (1) Except as otherwise provided in this section, for mineral extraction operations that are not adequately enclosed, the permittee shall perform visible emission inspections of such operations during representative, normal operating conditions in accordance with the following minimum frequencies:

Mineral Extraction Operation	Minimum Inspection Frequency
overburden removal	once per day of operation
soil removal	once per day of operation
overburden replacement	once per day of operation
overburden loading	once per day of operation
mineral loading	once per day of operation
drilling	once per day of operation
bulldozing	once per day of operation
grading	once per day of operation

- (2) The permittee shall maintain records of the following information:
- a. the date and reason any required inspection was not performed;
 - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measure(s);
 - c. the dates the control measure(s) was (were) implemented; and
 - d. on a calendar quarter basis, the total number of days the control measure(s) was (were) implemented.

The information in (d) shall be kept separately for each mineral extraction operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

- (3) The permittee shall maintain the following monthly blasting records:
- a. the date that each blast occurred;
 - b. the total number of blasts each month;
 - c. the tons of mineral/stone processed each month; and
 - d. the annual, year-to-date, number of blasts, and estimated tons processed [sum of (b) and (c) respectively, for each calendar month to date from January to December].

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.

- (2) The permittee shall identify the following information in the annual permit evaluation report in accordance with the monitoring requirements for term numbers d) (1), (2), and (3) above:
- a. each day during which an inspection was not performed by the required frequency;
 - b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented;
 - c. the total number of blasts for the previous calendar year; and
 - d. the total mineral throughput (i.e. the amount of stone loaded into trucks), in tons, for the previous calendar year.

f) Testing Requirements

- (1) Compliance with the emissions limitations specified in Section b)(1) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:
 22.19 tons of fugitive PM10 per year

Applicable Compliance Method:

The annual fugitive dust emission limitations were developed by applying the following emission factors/equations and control efficiencies to the associated process weight rates:

Mineral Extraction Operation	Maximum Process Weight Rate or Operations factor criteria	AP-42 Emission Factor	PM10 Emission Factor	Emission Factor Citation
overburden removal	500,000 tons removed/year	0.058 lb/ton removed PM10 35%	0.02 lb PM10 / ton	AP-42 11.9-4 (7/98)
soil removal	1000 VMT silt = 10% W = 290 tons	$E=k(s/12)^a (W/3)^b$ k= 1.5 PM ¹⁰ a =0.9 PM ¹⁰ b = 0.45	9.96 lbs PM10 / VMT	AP-42 13.2.2-4 AP-42 13.2.2-2 (11/06)
overburden replacement	500,000 tons /year	0.012 lb/ton PM10 35%	0.0042 lb PM10 / ton	AP-42 11.9-4 (7/98)
overburden	500,000 tons	0.037 lb/ton	0.016 PM10 / ton	AP-42 11.9-4

loading	/year	PM10 43%		(7/98)
mineral/stone loading	3,000,000 tons/year	0.000016 lb/ton PM10 43%	0.000007 PM10 / ton	AP-42 11.19-2-2 (08/04)
blasting	150 blasts/year A=20,000 ft ² /blast	0.000014(A) ^{1.5} PM10 81%	20.6 lbs PM10 /blast	AP-42 11.9-1 AP-42 11.9-3 (7/98)
Drilling	8,000 holes/year	1.30 lbs/hole PM10 81%	1.05 PM10 / hole	AP-42 11.9-4 (7/98)
bulldozing	1000 dozer hours silt (s) = 10 % moisture = 5%	1.0(s) ^{1.5} /M ^{1.4} x 0.75	2.49 lbs PM10 / hr	AP-42 11.9-1 (10/98) AP-42 13.2.2-1 (11/06) silt %
grading	1000 VMT S= 2.5 mph (speed for grading only)	0.051(S) ^{2.0} x 0.6	0.19 lb PM10 / VMT	AP-42 11.9-1 (7/98)

* Vehicle miles traveled (VMT)

Provided compliance is shown with the operational restrictions of this permit and the requirement to apply best available control measures, compliance with the annual emission limitations shall be assumed.

(2) Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average from the following mineral extraction operations: overburden removal, soil removal, overburden replacement, overburden loading, mineral loading, drilling, bulldozing, and grading.

Applicable Compliance Method:

If required, compliance shall be determined in accordance with U.S. EPA Method 9, with the following modifications:

- a. the data reduction and average opacity calculation shall be based upon sets of twelve consecutive visible emission observations recorded at 15-second intervals;

- b. opacity observations shall be made from a position that provides the observer a clear view of the emissions unit and the fugitive dust, with the sun behind the observer;
- c. where possible, visible opacity observations shall be conducted at a position of at least fifteen feet from the source of emissions and the line of sight should be approximately perpendicular to the flow of fugitive dust and to the longer axis of the emissions; and
- d. the visible opacity observations shall be made for the point of highest opacity within the fugitive dust emitted from the source.

g) **Miscellaneous Requirements**

- (1) None.