

De Minimis Air Contaminant Source Exemption

OAC 3745-15-05

Example Emission Calculations and Documentation

For

ABC Body Shop, Inc.

This packet contains:

1. Emission calculations example
2. Sample daily usage and emissions tracking sheet
3. Blank daily usage and emissions tracking sheet
4. Copy of OAC 3745-15-05 – *“De Minimis” Air Contaminant Source Exemption*

A *de minimis* air contaminant source is one that emits less than 10 pounds per day of air contaminants and less than 1 ton per year of hazardous air pollutants. A source that is *de minimis* does not need an air pollution permit from the Ohio EPA.

Disclaimer:

This guide is a tool to help companies claim and document a de minimis exemption. The examples provided are for information only, and do not guarantee compliance with all applicable state and federal environmental regulations.

EXAMPLE ONLY - ACTUAL DATA MAY VARY

De Minimis Air Pollutant Emission Calculations

Company: ABC Body Shop, Inc.

Equipment Description: Paint spray booth with exhaust filters.

Control Equipment: Paper exhaust filters

Normal Operating Schedule: 8 Hrs/day 2000 Hrs/year (1 shift)

Basis for Calculations: Material Balance
 Historic records for shop paint and solvent use
 MSDS for paints, reducer, and solvents

Actual Daily Emissions:

VOC of paints and solvents used:

1. Sherwin-Williams Polane Topcoats (various colors): 4.8 lbs VOC/gal. max. per MSDS
2. Sherwin-Williams Primer: 4.9 lbs VOC/gal. per MSDS
3. Reducer for paints: 6.71 lbs VOC/gal. per MSDS

Maximum daily usage (from historic records)

Primer: 0.5 gallon/day

Topcoats: 0.5 gallon/day

Reducer/cleanup: 0.5 gallon/day

Emissions from Primer = (4.9 lbs VOC/gal)(0.5 gal/day) = **2.45 lbs VOC/day**

Emissions from Topcoats = (4.8 lbs VOC/gal)(0.5 gal/day) = **2.4 lbs VOC/day**

Emissions from Reducer/Cleanup = (6.71 lbs VOC/gal)(0.5 gal/day) = **3.36 lbs VOC/day**

Total actual daily emissions = 2.45 + 2.4 + 3.36 = **8.21 lbs VOC/day**

Potential Daily Emissions at 24 hrs/day (3 shifts) = 8.21lbs VOC/day x 3 = **24.6 lbs VOC/day**

Summary:

Actual emissions are less than 10 lbs per day, but potential emissions can exceed 10 lbs per day. Therefore, to claim de minimis status per OAC 3745-15-05, the company must keep records to show that emissions are maintained below 10 lbs per day.

Description of records kept: Daily log of paint, reducer, and cleanup usage and resulting emissions.

Completed by: James Doe, ABC Body Shop

Date: May 14, 2008

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see the last paragraph in rule 3745-15-01 of the Administrative Code titled "Incorporation by reference."]

(A) For purposes of this rule, the following definitions apply:

- (1) "Actual emissions" means the amount of emissions an air contaminant source actually emits on a calendar day or calendar year basis, whichever is applicable.
- (2) "Air contaminant" means particulate matter, dust, fumes, gas, mist, radionuclides, smoke, vapor, or odorous substances, or any combination thereof, but does not include water by itself.
- (3) "Air contaminant source" or "source" means each separate operation or activity that results or may result in the emission of any air contaminant.
- (4) "Air pollution control equipment" shall mean control equipment which is not, aside from air pollution control requirements, vital to production of the normal product of the source or to its normal operation. Equipment is vital if the source could not produce its normal product or operate without it.
- (5) "Hazardous air pollutant" means any pollutant listed pursuant to Section 112(b) of the CAA.
- (6) "Potential to emit" or "potential emissions" shall mean the amount of emissions of an air contaminant which would be emitted from a source during a twenty-four hour calendar day or calendar year basis, whichever is applicable, if that source were operated without the use of air pollution control equipment unless such control equipment is, aside from air pollution control requirements, necessary for the facility to produce its normal product or is integral to the normal operation of the source. Potential emissions shall be based on maximum rated capacity.
- (7) "Similar sources" are:
 - (a) Sources for which construction and operation are essentially the same, although, the capacity of each source is not necessarily the same;
 - (b) Sources in which the physical or chemical process occurring in each source is essentially the same; and
 - (c) Sources from which essentially the same air pollutants are emitted.

- (B) Except as provided in paragraphs (C), (D) and (H) of this rule and division (B) of section 3704.011 of the Revised Code, any air contaminant source is exempt from Chapter 3704. of the Revised Code and rules adopted thereunder, unless the potential emissions of any one of the following exceeds ten pounds per day: particulate matter, sulfur dioxide, nitrogen oxides, organic compounds, carbon monoxide, lead or any other air contaminant.
- (C) The exemption contained in paragraph (B) of this rule shall not apply to a source if any of the following applies:
- (1) A requirement established under the CAA or regulations adopted under it limits the emissions of an air pollutant from the source to less than ten pounds per day or restricts the operation of the source in a manner equivalent to an emission limit of less than ten pounds per day;
 - (2) The source is subject to an emission limit adopted by the director to achieve and maintain the national ambient air quality standards or a rule adopted by the director to protect public health and welfare limits the emissions from the source to less than ten pounds per day of an air pollutant or restricts the operation of the source in a manner equivalent to an emission limit of less than ten pounds per day;
 - (3) The source emits radionuclides;
 - (4) The source alone or in combination with similar sources at the same facility, would result in potential emissions of any air pollutant in excess of twenty-five tons per year. In determining the total emissions from a group of similar sources, an enforceable permit emission limit shall be used in lieu of the potential to emit for such source or sources; or
 - (5) The source emits more than one ton per year of any hazardous air pollutants or combination of hazardous air pollutants.
- (D) The exemption provided in division (A) of section 3704.011 of the Revised Code does not apply to an air contaminant source having potential emissions greater than ten pounds per day (or one ton per year of one or more hazardous air pollutants) of any air contaminant unless the owner or operator of the source maintains records that are adequate to demonstrate that actual emissions from the source did not exceed ten pounds per day (or one ton per year of one or more hazardous air pollutants) and unless that source is not subject to the limitations specified in paragraph (C) of this rule.
- (E) In order to verify that actual emissions from a source described in paragraph (D) of this rule complied with the requirements of divisions (A) and (C) of section 3704.011 of the Revised Code during its operations, the owner or operator of the

source shall maintain records that show that emissions of any air contaminant from the source did not exceed ten pounds per day on each day the source emitted air contaminants, and that the source in any one year did not emit more than one ton of hazardous air pollutants as defined in division (1) of section 3704.03 of the Revised Code, and that the emissions from the source, in combination with similar air contaminant sources at the same facility, did not result in potential emissions of any air contaminant from the facility in excess of twenty-five tons during the preceding calendar year. Records consisting of one or more of the following types of information, if applicable, shall be adequate to make that demonstration, so long as the information clearly demonstrates that the owner or operator is operating in accordance with this rule:

- (1) A narrative description of how the emissions from the source were determined and maintained at or below the daily exemption level, and, for emissions of hazardous air pollutants, at or below the annual exemption level;
 - (2) A description of the air pollution control equipment used on the source and a statement that the source is not capable of operating without that pollution control equipment functioning;
 - (3) If air pollution control equipment is used, a copy of any report of the results of any emission test that was conducted following Ohio EPA approved methods, if applicable, or any other emission evaluation;
 - (4) A description of all production constraints required for the source to comply with the exemption levels;
 - (5) Records of actual operations that demonstrate that the daily and annual emissions from the source were maintained at or below the exemption level by the use of the necessary production constraints or pollution control equipment;
 - (6) A list of all similar sources at the same facility and a statement for each such source of the annual potential emissions. Compliance with paragraph (C)(4) of this rule shall be demonstrated; and
 - (7) A summation of the total emissions from each exempt or similar source, a summation of stated potential emissions from all sources identified in paragraph (E)(6) of this rule, and a written certification by the owner or operator that the applicable exemption levels were complied with.
- (F) Records developed under paragraph (E) of this rule shall be maintained by the owner of the source at a location at the facility for a period of two years following the recording of the information, and shall be provided to the director upon his request or upon the request of his authorized representative.

- (G) The owner or operator of such an exempt source not subject to paragraph (E) of this rule, upon the request of the director or his authorized representative concerning such source, shall provide information that is adequate to demonstrate that the source qualifies for the exemption.
- (H) Nothing in this rule shall be construed to exempt any source from requirements of the CAA, including its being considered for purposes of determining whether a facility constitutes a major source or is otherwise regulated under Chapter 3745-77 of the Administrative Code or any requirement to identify insignificant activities and emissions levels in a title V permit application. In addition, this rule does not exempt any source that is a part of a major new source or major modification that would be required to meet any requirements under applicable state or federal regulations.
- (I) If a source exempt under this rule should at any time exceed the exempt emission levels provided in paragraphs (B) and (D) of this rule, the owner or operator of such source shall immediately submit a written report describing the nature and cause of the exceedance. Upon request by the director, the owner or operator of such source shall submit an application for a permit to install if required by Chapter 3745-31 of the Administrative Code and an application for a permit to operate pursuant to Chapter 3745-35 or Chapter 3745-77 of the Administrative Code, as applicable.

Effective: 01/22/2009

R.C. 119.032 review dates: 11/30/2006 and 01/22/2014

CERTIFIED ELECTRONICALLY

Certification

01/12/2009

Date

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