



Construction Permits and Approvals INFORMATIONAL SHEET

[KDHE, BUREAU OF AIR](#)

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ANY PERSON WHO PROPOSES TO CONSTRUCT OR MODIFY A SOURCE OF AIR EMISSIONS MAY NEED A PERMIT OR AN APPROVAL PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. (K.A.R. 28-19-300)

This document addresses, in summary form, the following:

- I. Who needs a construction permit prior to beginning construction or modification;
- II. Who needs a construction approval prior to beginning construction or modification;
- III. Who needs a Prevention of Significant Deterioration (PSD) construction permit prior to beginning construction or modification;
- IV. Calculating potential-to-emit;
- V. Submitting a construction permit application;

Sources which meet applicability standards described in K.A.R. 28-19-500 are required to submit an operating permit application. Construction permits approve the construction, installation or modification of proposed sources of air emissions. Operating permits establish conditions for continued operation.

I. Who needs a Construction Permit

[These requirements can be found at K.A.R. 28-19-300(a).]

A permit to construct or modify an air emission source is required if:

1. The potential-to-emit of the proposed source or the increase in the potential-to-emit due to the modification equals or exceeds:
 - a. 100 tons per year of particulate matter for an agricultural-related activity;
 - b. 25 tons per year of particulate matter or 15 tons per year of PM₁₀ for any activity which is not an agricultural-related activity;
 - c. 10 tons per year of directly emitted PM_{2.5} per year.
 - d. 40 tons per year of sulfur dioxide (SO₂) or sulfur trioxide (SO₃), or a combination thereof; volatile organic compounds; or oxides of nitrogen (NO_x);
 - e. 100 tons per year of carbon monoxide;
 - f. 0.6 tons per year of lead; or
 - g. 10 tons per year of any single hazardous air pollutant or 25 tons per year of a combination of hazardous air pollutants. (The hazardous air pollutants are listed at K.A.R. 28-19-7(gg).)
2. The facility is requesting a federally enforceable operation restriction or permit condition pursuant to K.A.R. 28-19-302(b).
3. The emissions unit or stationary source is an incinerator used to dispose of refuse by burning or pyrolysis or used for the processing of salvageable materials, except incinerators installed on residential premises that contain less than six dwelling units and that are used to burn waste materials associated with normal habitation of those dwelling units.

II. Who needs a Construction Approval

[These requirements can be found at K.A.R. 28-19-300(b).]

An approval to construct or modify an air emission source is required for certain sources not required to obtain a construction permit if:

1. The potential-to-emit of the proposed source or the increase in the potential-to-emit due to the modification equals or exceeds:
 - a. 5 pounds per hour of particulate matter or, in the case of a non-agricultural related activity, 2 pounds per hour of PM₁₀;
 - b. 2 pounds per hour of sulfur dioxide (SO₂) or sulfur trioxide (SO₃), or a combination thereof; 50 pounds per 24 hour period of carbon monoxide, oxides of nitrogen calculated as nitrogen dioxide, or volatile organic compounds (except Wyandotte and Johnson counties, approval is necessary if volatile organic compound emissions equal or exceed 15 pounds per 24 hour period or 3 pounds per hour);
 - c. 0.1 pound per hour of lead or lead compounds.
2. The construction, reconstruction, or modification project triggers:
 - a. 40 CFR Part 60
 - b. 40 CFR Part 61
 - c. 40 CFR Part 63 (exceptions include Subpart M, CCCCCC, and Area Source ZZZZ)
3. The source is seeking an approval with operation restrictions pursuant to K.A.R. 28-19-302(c).

III. Who needs a Prevention of Significant Deterioration (PSD) construction permit

1. Under the federal construction permit program in areas that have pollution levels below the National Ambient Air Quality Standards (NAAQS), referred to as attainment areas, sources that meet the appropriate criteria will obtain a Prevention of Significant Deterioration (PSD) permit. In order for a facility to trigger the requirement to obtain a PSD or NSR construction permit, they must meet the following criteria: The facility must have potential emissions of:
 - 100 tons per year (tpy) of any regulated PSD pollutant if the source is one of 28 specific source categories listed in the PSD rules (40 Code of Federal Regulations (CFR) §52.21(b)).

Or,

 - 250 tpy of any regulated PSD pollutant for sources not specifically listed in the PSD rules.
2. For new projects and modifications at existing major PSD sources, the facility must have net emissions increase greater than the following PSD significance Levels to trigger PSD review: [40 CFR 52.21(b)(23)(i)]
 - Carbon monoxide: 100 tons per year (tpy)
 - Nitrogen oxides: 40 tpy
 - Sulfur dioxide: 40 tpy
 - Particulate matter: 25 tpy of particulate matter emissions
 - PM₁₀: 15 tpy

- PM_{2.5}: 10 tpy of direct PM_{2.5} emissions; 40 tpy of sulfur dioxide emissions; 40 tpy of nitrogen oxide emissions unless demonstrated not to be a PM_{2.5} precursor under paragraph 40 CFR 52.21(b)(50).
- Ozone: 40 tpy of volatile organic compounds or nitrogen oxides
- Lead: 0.6 tpy
- Fluorides: 3 tpy
- Sulfuric acid mist: 7 tpy
- Hydrogen sulfide (H₂S): 10 tpy
- Total reduced sulfur (including H₂S): 10 tpy
- Reduced sulfur compounds (including H₂S): 10 tpy
- Municipal waste combustor organics (measured as total tetra-through octa-chlorinated dibenzo-p-dioxins and dibenzofurans): 3.2×10^{-6} megagrams per year (3.5×10^{-6} tons per year)
- Municipal waste combustor metals (measured as particulate matter): 14 megagrams per year (15 tons per year)
- Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride): 36 megagrams per year (40 tons per year)
- Municipal solid waste landfills emissions (measured as nonmethane organic compounds): 45 megagrams per year (50 tons per year)

IV. Calculating Potential-to-Emit (PTE)

Contact KDHE for additional guidance if you are unfamiliar with or have questions pertaining to the procedure for calculating potential-to-emit.

Potential-to-emit is determined by estimating worst-case emissions for each pollutant of concern and calculating those emissions as if the source was continuously operating at maximum capacity.

For example, if, under maximum emission rate conditions, NO_x emissions from the source were determined to be 3 pounds per hour, the potential-to-emit of the source in tons per year would be determined by multiplying the hourly emission rate (3 pounds) times the number of hours in a year (8760) and divided by the number of pounds in a ton (2000), in which case the potential-to-emit of the source would be 13.14 tons per year.

$$\frac{\text{Maximum emission rate in pounds per hour} \times 8760 \text{ hours per year}}{2000 \text{ pounds/ton}} = \text{PTE in tons per year}$$

The only exception to this rule pertains to calculating the potential-to-emit for volatile organic compound (VOC) emissions from surface coating operations (for example, spray-painting) and printing presses. In these cases, the potential-to-emit for VOC emissions can be calculated by dividing total actual (or proposed) annual usage of VOCs (in pounds) by the actual (or proposed) hours of operation during the annual period, multiplying the quotient by 8760 hours per year and dividing the product by 2000 pounds per ton.

$$\frac{\text{Actual, Annual VOC used (in pounds)}}{\text{Annual actual hours of operation}} = \text{pounds of VOC used per hour}$$

$$\frac{\text{Pounds of VOC used per hour} \times 8760 \text{ hours per year}}{2000 \text{ pounds/tons}} = \text{PTE in tons per year}$$

V. Submitting a Construction Permit/Approval Application

[These requirements are found at K.A.R. 28-19-301(a) and 28-19-304(a, b, c, and d).]

The following must be submitted through the [Kansas Environmental Information Management System \(KEIMS\)](#) to the Bureau of Air, before an application for a construction permit can be processed:

1. A completed construction permit application in KEIMS.
2. All applicable equipment forms and other information [cover letter, potential-to emit calculations (both project and facility-wide), SDS, manufacturers data sheets, etc.]
3. Submission of the permit/approval application fee. Application fees are determined according to the source categories specified in K.A.R 28-19-304(a,b and c)
4. Application fee(s) for a PSD permit application is specified in K.A.R 28-19-304(d).
5. Each fee, which shall be nonrefundable, shall be remitted in the form of a check, draft, credit card payment, or money order made payable to the Kansas department of health and environment. Receipt of any type of payment that is not covered by sufficient funds shall be cause for the denial of the construction permit or approval. [K.A.R. 28-19-304(e)]
6. For purposes of construction permit or approval applications, the following are not considered modifications [K.A.R 28-19-300(c)]:
 - a. Routine maintenance or parts replacement.
 - b. An increase or decrease in operating hours or production rates if:
 - production rate increases do not exceed the originally approved design capacity of the stationary source or emissions unit; and
 - the increased potential-to-emit resulting from the change in operating hours or production rates do not exceed any emission or operating limitations imposed as a permit condition in a previously issued permit or approval.