

# Air Permitting for Changes at Existing Sources in Kentucky

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## Disclaimer

- Information contained in this presentation is intended only as a general overview of air permitting and regulatory requirements.
  - Decisions should not be based solely on the information contained in this presentation.
  - During the regulatory evaluation process, refer to the appropriate state and federal regulations and official policy documents.
  - Presentation does not apply to sources in Jefferson County, Kentucky (separate program)
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We need to start this project  
right away

Do we have to wait for an air  
permit before we start?

How long will it take to get the  
permit?

## Topics to be Covered

- Types of source-wide permits
  - What requires a permit revision or notification?
  - Categories of permit changes
    - Qualifications
    - Permit application contents
    - When can construction start
  - Example scenarios
  - Application contents
  - Questions / discussion
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## Types of KY Source-wide Air Permits

Type of permit affects the process for changing it

– Registration

(PTE of RAP  $\geq 10$  but  $< 25$  ton/yr)

– State Origin Permit

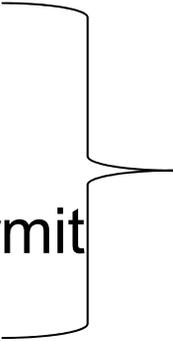
(PTE of RAP  $\geq 25$  but  $< 100$  ton/yr)

– Conditional Major Permit

(Limits RAP PTE to  $< 100$  ton/yr)

– Major Source / Title V Permit

(RAP PTE  $\geq 100$  ton/yr)



These have more (and more complex) categories of changes available

Note that different emissions thresholds apply for hazardous air pollutants and additional criteria exist based on applicable regulations

Details at <http://air.ky.gov/SiteCollectionDocuments/KentuckyPermitting.pdf>

# Detailed Permitting Thresholds

## Kentucky's Permitting/Registration Thresholds

**Nothing is required (no registration or permit) if a source's PTE is:**

- $< 2$  tpy of a HAP;
- $< 5$  tpy of combined HAPs;
- $< 10$  tpy of a RAP; and
- The source is not subject to a NSPS or NESHAP

**Registration is required if a source's PTE is:**

- $\geq 2$  but  $< 10$  tpy of a HAP
- $\geq 5$  but  $< 25$  of combined HAPs;
- $\geq 10$  but  $< 25$  tpy of a RAP subject to an AR that does not specify the MOC;
- $\geq 10$  but  $< 100$  tpy of a RAP subject to an AR that specifies the MOC;
- $\geq 10$  but  $< 100$  tpy of a RAP that is not subject to an AR; or
- If the source is subject to a NSPS or NESHAP.

**A state origin permit is required if a source's PTE is:**

- $< 10$  tpy of a HAP;
- $< 25$  tpy of combined HAPs; and
- $\geq 25$  but  $< 100$  tpy of a RAP subject to an AR that does not specify the MOC.

**A Title V permit is required if a source's PTE is:**

- $\geq 10$  tpy of a HAP;
- $\geq 25$  tpy of combined HAPs; or
- $\geq 100$  tpy of a RAP; and
- The source's PTE is not limited below these thresholds by a permit (conditional major) or prohibitory rule.

### Abbreviations:

- PTE means potential to emit, i.e., the maximum amount of a pollutant that a source is physically capable of emitting, or is legally allowed to emit, whichever is less
- HAP means hazardous air pollutant
- RAP means regulated air pollutant other than a HAP
- AR means applicable requirement
- MOC means method of compliance
- NSPS means New Source Performance Standard
- NESHAP means National Emission Standard for Hazardous Air Pollutants, and includes MACT/NESHAPS

## Potential to Emit (PTE)

- Kentucky permitting is based on potential to emit (PTE)
- Maximum capacity to emit (w/o air pollution controls unless required by a regulation) under the physical/operational design
  - Default is uncontrolled emissions at maximum hourly design and continuous operation (8760 hours/year)
  - Limits to PTE must be enforceable (i.e., required by permit or regulation)
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## What Requires a Permit Change?

- Adding a new source of air pollution (**Construction**)
  - Rebuilding an existing source (**Reconstruction**)
  - Changing an existing source resulting in increased emissions (**Modification**)
  - Changes that conflict with the current permit or add new regulatory requirements not already listed
  - If none of the above
    - Typically, no permit revision required
    - Document change and conclusion that no permit is required for internal files and proceed on
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## Exempt From Consideration as a Modification

- Changes that do not result in an emission increase and do not emit a pollutant not previously emitted
  - Routine maintenance, repair, and replacement
  - Increase in production rate or hours of operation **without making a physical change to equipment and not prohibited by existing permits**
  - Use of alternative fuels or raw materials that the source was **designed to accommodate**
  - Addition of air pollution control equipment or replacement with control equipment which is more environmentally beneficial (and not add new pollutant)
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# How to Permit a Change

## Kentucky's Air Permitting Program

- Most changes require a permit revision
  - The good news
    - Some changes don't have to wait for the permit revision to be issued, and instead can be started after submitting an application
    - Increased operational flexibility
  - With flexibility comes responsibility
    - Determination burden passed from DAQ to source
    - Source is responsible for determining if the change can start without a permit, and which regulations apply
    - Greater risk since no prior approval by DAQ
  - Some changes do require waiting for a permit
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## Start of Construction / Modification

- Prohibited without a permit (if one is required):
    - Broadly interpreted as anything of a permanent nature other than site clearing or preparation
    - Such as, pouring concrete for foundations
  - What you can do before a permit:
    - Land clearing
    - Receive and store equipment at plant site
    - But not assembling equipment or connecting to utilities, piping, etc.
  - Complex topic, check with agency if unsure
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## Permit Changes at Title V and Conditional Major Sources

Category of Change	Can Start Change
Administrative Amendment	Upon submittal
Section 502(b)(10) Change	7 workdays after submittal
Off-Permit Change	
Minor Permit Revision	After submittal of “complete” application
Significant Permit Revision	When proposed permit is issued – must wait for permit
PSD / NSR <sup>1</sup> <i>Subset of significant revision</i>	

<sup>1</sup> Prevention of Significant Deterioration / New Source Review

# Administrative Amendments

## What Qualifies?

- Correct typographical errors
  - Changing names, addresses, etc.
  - Changing ownership
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## Administrative Amendments

### Application and Issuance

- Submit appropriate application forms
  - Change can begin immediately upon submittal
  - Ownership changes are slightly different
    - Within 10 days after ownership changes submit form, signed agreement specifying terms of ownership change, and certification from Secretary of State
  - DAQ typically issues an amended permit within 60 days
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## Section 502(b)(10) Changes

### What Qualifies?

- Does not trigger PSD or NSR
  - Does not establish limits to avoid PSD or NSR
  - Does not violate existing permit conditions
  - DAQ prefers that changes that trigger new regulations not already in the permit be submitted as Minor Permit Revisions
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## Section 502(b)(10) Changes

### Application and Issuance

- Submit notification including: description, emissions, new applicable regulations. Application forms are recommended but not specifically required by regulation.
  - Change can begin 7 workdays following submittal
  - Keep notification on file with permit
  - DAQ will incorporate any changes into the permit at the next renewal or significant permit revision
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## Off-Permit Changes

### What Qualifies?

- Practically Off-Permit and Section 502(b)(10) criteria are the same
- DAQ prefers that changes be submitted as 502(b)(10) Changes rather than Off-Permit Changes

### Application and Issuance

- Same as 502(b)(10) Change, except for Insignificant Activities

# Off-Permit Changes AND Insignificant Activities

## Special Case for Insignificant Activities

- Insignificant activities are defined in the permit regulations
    - PTE < ½ ton/yr combined HAP and < 5 ton/yr any other pollutant
    - Not subject to an applicable regulation other than generally applicable requirements (process weight, fugitive particulate)
  - Notification is not required if the off-permit change is also an Insignificant Activity
    - Any Insignificant Activity should also qualify as an Off-Permit Change
  - Must keep record of change on file with the permit
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## Minor Permit Revisions

### What Qualifies?

- Does not trigger PSD or NSR
  - Does not establish limits to avoid PSD or NSR
  - Minor revisions can change existing permit conditions as long as the change is not “significant”
    - Off-Permit and 502(b)(10) can't change existing permit conditions
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## Minor Permit Revisions

### Application and Issuance

- Submit application including description of change, emissions, new requirements, and DEP7007 forms
- Application must include proposed permit conditions to replace existing conditions
- Change can begin after submittal of a Complete application
- DAQ has up to 60 days to call an application complete
- **DAQ typically does not issue completeness letters.** Check on their website for status at (or call or email permit writer)

[http://dep.gateway.ky.gov/eSearch/Search\\_Permit\\_Activity.aspx](http://dep.gateway.ky.gov/eSearch/Search_Permit_Activity.aspx)

## Minor Permit Revisions

### Application and Issuance

- After completeness, and until DAQ issues the new permit, comply with proposed permit conditions in place of existing permit conditions
  - Regulations require DAQ to issue a permit within 90-day of receiving a complete application
  - When permit is issued, comply with new permit in place of conditions proposed in application, if different
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## Significant Permit Revisions

### Required For:

- PSD and NSR
  - Establishing limits to avoid PSD / NSR review
  - Establishing limits to avoid Title V or major source HAP status
  - “Significant” changes to existing monitoring conditions
  - Relaxation of existing record keeping or reporting conditions
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## Significant Permit Revisions

### Application and Issuance

- Submit application including description of change, emissions, new requirements, and DEP7007 forms.
  - 30-Day Public and 45-Day EPA review
  - It typically takes 6 to 9 months to receive a permit
  - Change can't begin until the proposed permit is issued (after public comment)
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## Permit Changes at State-Origin Sources

### Only Two Categories

#### – Section 12 changes

- PTE  $\geq$  2.5 ton/yr single HAP or  $\geq$  7.5 ton/yr combined HAP, or
- PTE  $\geq$  25 ton/yr any other pollutant

#### – Section 13 changes

- Less than the above emission thresholds
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## Permit Changes at State-Origin Sources

### Section 12 Change Application and Issuance

- Submit application including description of change, emissions, and DEP7007 forms
  - No public notice
  - It typically takes DAQ 3 to 4 months to issue a permit
  - Must wait until the permit is issued to make the change
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## Permit Changes at State-Origin Sources

### Section 13 Change Application and Issuance

- Same application content requirements as Section 12
  - No public notice
  - Change can begin immediately after submitting the application
  - No requirement to wait for a completeness determination
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## Permit Changes at Registration Sources

- No categories
  - For all changes that require a permit, submit a registration form (DEP7039A)
  - Change can begin immediately upon submittal of a complete registration form.
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# Examples

Assumes Title V or Conditional Major

## Summary for Title V and Conditional Major Sources

Type of Change	502(b)(10) and Off-Permit	Minor Revision	Significant Revision
New emission unit*	Yes	Yes	Yes
Emissions increase at existing emission unit*	Yes	Yes	Yes
New regulation*	Yes	Yes	Yes
Change existing permit emission limit*	No	Yes	Yes
Change existing permit monitoring, record keeping, reporting*	No	Yes	Yes
Establish limit to avoid PSD / NSR or Title V permitting	No	No	Yes
PSD / NSR review	No	No	Yes

\*Unless change triggers PSD / NSR or requires limits to avoid PSD / NSR

## Example 1

### ■ Example 1

- Existing storage tank. Permit states 100,000 gal capacity.
- Capacity is actually 1 million gal, as stated in the application. Emissions in application are based on 1 million gallons.
- Permit review was based on actual tank size

### ■ How To Permit:

- Capacity is a typographical error
  - Qualifies as an administrative amendment
  - Send letter to DAQ
  - DAQ will issue amended permit within 60 days
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## Example 2

- Installation of a new storage tank (8,000 gallon capacity)
  - No applicable requirements
  - Potential VOC = 1 ton/yr, Total HAP = 300 lb/yr
  - Tank qualifies as Insignificant Activity
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## Example 2 – How to Permit

- Qualifies as both 502(b)(10) and Off-Permit
  - No notification required since Insignificant and Off-Permit
  - Can install tank immediately as Off-Permit
    - Retain record of change on file with permit
  - Alternatively submit 502(b)(10) application
    - Install tank 7 workdays later
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## Example 3

- Installation of a new small boiler at an area HAP source. Capacity = 20 MMBtu/hr natural gas
  - Potential NOx emissions = 9 tons/yr
  - Subject to NSPS Dc (requires daily fuel use records) which is not already in the permit
  - Subject to 59:015 (KY boiler rule) emission limits
  - Exempt from Boiler MACT (gas-fired at area source)
  - Not an insignificant activity
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## Example 3 – How to Permit

- Qualifies as both 502(b)(10) and Off-Permit
  - Triggers new regulation not already in the permit, so DAQ prefers a Minor Revision
  - Submit to DAQ as either
    - Minor revision and begin once DAQ determines application is complete, or
    - 502(b)(10) then wait 7 workdays (if compelling reason)
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## Example 4

- Existing boiler
  - Permit PSD avoidance limits:  $\text{SO}_2 < 39$  tpy, fuel oil use  $< 1,000,000$  gal/yr, sulfur content  $< 5\%$
  - Source wants to burn more fuel oil
  - Could burn 2,000,000 gal/yr of 2.5% sulfur fuel oil and still comply with 39 tpy limit
  - Want to change permit fuel oil and sulfur content limits, but not  $\text{SO}_2$  emission limit
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## Example 4 – How to Permit

- Emission and fuel oil limits were taken to avoid PSD, so minor permit revision not allowed
  - Must be processed as a significant permit revision
  - Can't exceed current fuel oil limits until DAQ issues revised permit
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# Applications

## Application Contents

- Administrative Information – Form DEP7007 AI
    - Must be signed by Responsible Official
  - Process description and flow diagram
  - Emission calculations
  - Applicable requirements - Form DEP7007 V or redline permit
  - Other relevant DEP7007 application forms
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## Application Forms

- Application forms and instructions available on the Kentucky DAQ website
  - [DEP7007AI](#) -- **Administrative Information**
  - [DEP7007A](#) -- **Indirect Heat Exchanger, Turbine, Internal Combustion Engine**
  - [DEP7007B](#) -- **Manufacturing or Processing Operations**
  - [DEP7007C](#) -- Incinerators and Waste Burners
  - [DEP7007F](#) -- Episode Standby Plan
  - [DEP7007J](#) -- **Volatile Liquid Storage**
  - [DEP7007K](#) -- Surface Coating or Printing Operation
  - [DEP7007L](#) -- Concrete, Asphalt, Coal, Aggregate, Feed, Corn, Flour, Grain and Fertilizer
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## Application Forms

- [DEP7007M](#) -- Metal Cleaning Degreasers
  - [DEP7007N](#) -- **Emissions, Stacks and Controls Information**
  - [DEP7007P](#) -- Perchloroethylene Dry Cleaning Systems
  - [DEP7007S](#) -- Service Stations
  - [DEP7007T](#) -- Metal Plating and Surface Treatment Operations
  - [DEP7007V](#) -- **Applicable Requirements and Compliance Activities**
  - [DEP7007Y](#) -- Good Engineering Practice (GEP) Stack Height Determination
  - [DEP7007AA](#) -- Compliance Schedule for Non-complying Emission Units
  - [DEP7007BB](#) -- Certified Progress Report
  - [DEP7007CC](#) -- Compliance Certification
  - [DEP7007DD](#) -- **Insignificant Activities**
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## Application Submittal

- Applications can be submitted at the Kentucky Business One Stop Portal <https://onestop.ky.gov/> or mailed
    - Kentucky no longer accepts emailed applications
  - There is no air permit application fee or permit issuance fee in Kentucky
  - Confidential Business Information (CBI)
    - Follow 401 KAR 1:060. Submit Confidential and Non-Confidential versions of the application
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# Questions / Discussion

# Thank You

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