

Air Permitting for Changes at Existing Sources in Kentucky

April 2018



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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 ≥ 10 but < 25 ton/yr)

– State Origin Permit

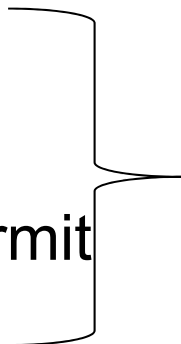
(PTE of RAP ≥ 25 but < 100 ton/yr)

– Conditional Major Permit

(Limits RAP PTE to < 100 ton/yr)

– Major Source / Title V Permit

(RAP PTE ≥ 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:

- ≥ 2 but < 10 tpy of a HAP
- ≥ 5 but < 25 of combined HAPs;
- ≥ 10 but < 25 tpy of a RAP subject to an AR that does not specify the MOC;
- ≥ 10 but < 100 tpy of a RAP subject to an AR that specifies the MOC;
- ≥ 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
- ≥ 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:

- ≥ 10 tpy of a HAP;
- ≥ 25 tpy of combined HAPs; or
- ≥ 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
-

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 ¹ <i>Subset of significant revision</i>	

¹ 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
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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

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

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 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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