

# Air Permitting for Major Sources/Title V (Part 2)

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# Introduction

- Who, what, where, why of Title V permitting
- How can I avoid needing one?
- How do I modify my Title V?
- What do I need to include in the renewal application?
- What's new in Title V?
- Where can I get help?

# What is a Title V Permit?

- Operating permit for air pollution sources
- Based on the requirements found in 1990 CAAA, Title V
- Designed for “large” air pollution sources



# What is a Title V Permit?

- Contains all applicable air pollution requirements
- Contains emission limits, operational restrictions, monitoring requirements, testing requirements and reporting requirements
- Applies to entire facility

# Who needs a Title V Permit?

- Any facility that is a major Title V source.
- Major Title V thresholds are:
  - 100 tons per year or more of any one regulated pollutant (PM10; nitrogen oxides; sulfur dioxide; carbon monoxide; volatile organic compounds; and lead), or
  - 100,000 tons per year GHGe (**NEW!**), or
  - 10 tons per year or more of any one hazardous air pollutant (HAPs), or
  - 25 tons per year or more of any two or more HAPs.
  - Based on potential to emit

## What does “potential to emit” (PTE) means?

- Maximum capacity to emit
- Under physical and operational design
- Can include air pollution equipment, operating restrictions if;
  - Federally enforceable, or
  - Legally and practically enforceable by the state

# What does “potential to emit” (PTE) mean?

- *OAC rule 3745-77-01(CC), "Potential to emit" means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable or legally and practicably enforceable by the state. Secondary emissions do not count in determining the potential to emit of a stationary source*

# How do you figure out what your PTE is?

- Must calculate for each emissions unit (air pollution source)
  - Calculate emissions with controls at maximum capacity
    - Each criteria pollutant
    - Total GHGe
    - Each HAP
    - Sum of HAPs

# How do you figure out what your PTE is?

- Determine if physical or operational restrictions apply
- Check for rules that restrict emissions
- Check to make sure controls/restrictions/rules are federally/practically state enforceable
- Sum them together for entire facility

## Other triggers for Title V permits

- Any source subject to Section 111 of the act (NSPS)
- Any source subject to section 112 of the act unless exempt (HAPS, MACT)
- Any “affected source” (utilities)
- Any 40 CFR Part 70.3 source (Describes required elements for Title V programs)

## What rules apply

- Ohio Administrative Code (OAC) rule 3745-77
- <http://www.epa.ohio.gov/dapc/regs/regs.aspx#TVPermitRules>

# Preparation & Processing Issues

- Application preparation time is significant
- May take 18+ months for Ohio EPA to process
- Permit lasts five years
- Must be renewed
- No application fee, no permit issuance fee
- Fees based on emissions
- Fee for reporting year 2012 is \$46.73/ton.

## How do you apply?

- Applications must be submitted electronically through “Air Services”
- Air Services is an web based emissions unit, permit tracking and application system
- Part of Ohio EPA’s eBusiness Center
  - <https://ebiz.epa.ohio.gov/login.html;jsessionid=xDRyTvpbXf4nM3x05j8r4YdhNfG2qpZ2nf2nsfP5vCVWpmJNVv8S!-966781721>
- Must get a User ID and password to work in Air Services

# What are the processing steps?

- You submit application
- Ohio EPA reviews and creates permit
- **Draft** permit issued – for any interested party comment
- **Preliminary Proposed Permit** issued – for the application's comments
- **Proposed Permit** issued – for USEPA comments
- **Final permit** issued

# What does the permit contain?

- Applicable rules
- Emission limits
- Operational restrictions
- Monitoring requirements
- Reporting requirements
- Testing requirements

## How is the permit organized?

- Cover letter
- Table of Contents
- Authorization
- A. Standard Terms and Conditions
- B. Facility-Wide Terms and Conditions
- C. Emissions Unit Terms and Conditions
  - Grouped by emissions unit
  - Organized by previous slide

## What are the major obligations under the permit?

- Permit needed to have legal authority to operate
- Make sure sources comply with limits
- Comply with operational restrictions
- Do any monitoring required

## What are the major obligations under the permit?

- Compile records, submit reports
- Timely completion of any testing
- Complete annual certification of compliance (Responsible Official must be able to attest to compliance)

## How do you avoid needing a Title V permit?

- Obtain federally enforceable/state practically enforceable restrictions such that your potential to emit is less than the thresholds
  - Restrict operation time, materials processed, etc.
  - Reduce emissions from processes
    - Add controls
    - Change processes
    - Change materials
    - Etc.

## If you avoid needing a TV permit, what do you get?

- State-based operating permit
- Permit-to-install and Operate (PTIO)
- May get one or more PTIOs to cover all emissions units
- Subset - Federally Enforceable State Operating Permit (FESOP), or synthetic minor
- Must live within restrictions

## How do I modify my Title V?

- Determine what needs to change
- Discuss change with permit contact
- Determine if need Permit-to-Install first
- Determine the modification type
- (Each type has different obligations)

# Modification Types

Mod Type	For:	When Effective?
<b>Off-permit change</b>	Non conflicting PTIs; exemptions; not addressed or prohibited in permit	Appl. Submitted or PTI issued, TV mod issued
<b>Administrative Permit Amendment (APA)</b>	Typos; name, address change; increased monitoring	When request is submitted
<b>Minor Permit Modification (MPM)</b>	Changes that are not SPM (see below)	When final mod issued (Proposed, then final only)
<b>Significant Permit Modification</b>	NSPS, MACT, PSD, Nonattainment mods; minor change to monitoring, recordkeeping etc.	When final mod issued (Draft, PPP, PP, Final must be issued)

# Significant Permit Modification

- SPM is used for significant changes to the Title V that typically include:
  - Changes in existing units such as:
    - Emissions increases above Title I modification levels, or
    - Significant changes to monitoring or relaxation of reporting or recordkeeping terms
  - Incorporating new units that qualify as a Title I modification (PSD or major nonattainment NSR) NSPS applicability to existing source

# Significant Permit Modification

What is considered a Title I modification?

1. NSPS Source – existing sources only:
  - If it meets the definition of a “modification” as defined in 40 CFR 60.14
2. HAPS Sources – existing and new sources
  - If the PTE increases and it is considered a “construction” or “reconstruction” of a major source of HAPS as defined in 40 CFR 60.14
  - If the PTE for HAPS increased but it is not considered a reconstruction, however, now a MACT is applicable to the source category

# Significant Permit Modification

What is considered a Title I modification cont'd?

3. PSD Sources – existing and new sources
  - If it meets the definition of a “major modification” under Part C of Title I (PSD) and therefore, a PSD PTI is required
  
4. Nonattainment Area Sources – existing and new sources
  - If it meets the definition of a “major modification” under Part D of Title I (Nonattainment Areas) and, therefore, will require a major nonattainment new source PTI which includes obtaining air emission offsets

# When can the facility begin the change?

Step 1

Would operation of the **change requested** be prohibited by the current Title V permit?

***NO***

Operation of the **source and change** can begin immediately after receiving the PTI, but permittee must apply for the SPM within the 1 year period required by the PTI

***YES***

Operation of the **change** cannot begin until the SPM is issued final. Proceed to Step 2

# When can the facility begin the change?

Step 2

Could the **source** be operated in a way that would not be prohibited by the current Title V permit (in compliance with all T&Cs)?

*YES*

Operation of the **source** can begin, in compliance with the current Title V permit, but operation of the **change** cannot begin until the SPM is issued final

*NO*

Operation of the **source and change** cannot begin until the SPM is issued final

# Minor Permit Modifications

## Conditions for Use

1. Cannot violate an applicable requirement include a PTI
2. Cannot be a Title I modification (major modification PTI)
3. Cannot involve significant changes to existing monitoring, reporting of recordkeeping terms
4. Cannot require or change a case-by-case determination under federal requirements
5. Cannot seek to change terms condition for which there is no underlying applicable requirement (i.e. emissions cap)

# Monitoring Recordkeeping & Reporting Existing Units

- The following mechanisms can be used for changes to MRR:
  - APA – increases in monitoring or reporting frequency
  - MPM – insignificant changes to existing MRR
  - SPM – significant changes to existing monitoring or a relaxation of reporting or recordkeeping
  - Reopening – if there was a material mistake or inaccurate statement made when establishing the MRR

# Monitoring Recordkeeping & Reporting Existing Units

- Don't get caught up in thinking it's the emissions that trigger the modification type, often it can be the changes to MRR.
- Is it a MPM or a SPM?
  - Ohio EPA has developed guidelines to help identify the significance or relaxation of an MRR change.

# Modification Types

- **Guidance for Incorporating Facility Changes into a Title V Permit:**
- [http://www.epa.ohio.gov/portals/27/title\\_v/3-9-05guidancefinal.pdf](http://www.epa.ohio.gov/portals/27/title_v/3-9-05guidancefinal.pdf)

## Part 64 (CAM) design principles

*Monitoring sufficient to provide a reasonable assurance of compliance with the applicable requirements (e.g., emissions limits) and to ensure operators pay the same level of attention to pollution control measures as to production activities.*

# What is CAM rule?

40 CFR Part 64 - Compliance Assurance Monitoring

- *Implements the monitoring design principle for a reasonable assurance of compliance*
- *Targets facilities with add-on control devices*
- *Requires source owners to design monitoring to fit site and incorporate into permits*

# Who will be affected by CAM?

Rule applies to each pollutant-specific emissions unit (PSEU) that:

- *Is located at major source subject to Title V operational permits program, and*
- *Is subject to emission limitation and has a control device to meet that limit (e.g., ESPs, scrubbers, fabric filters), and*
- *Has precontrol emissions >major source size threshold (e.g., >100 tons/year uncontrolled emissions).*

# Who will be affected by CAM?

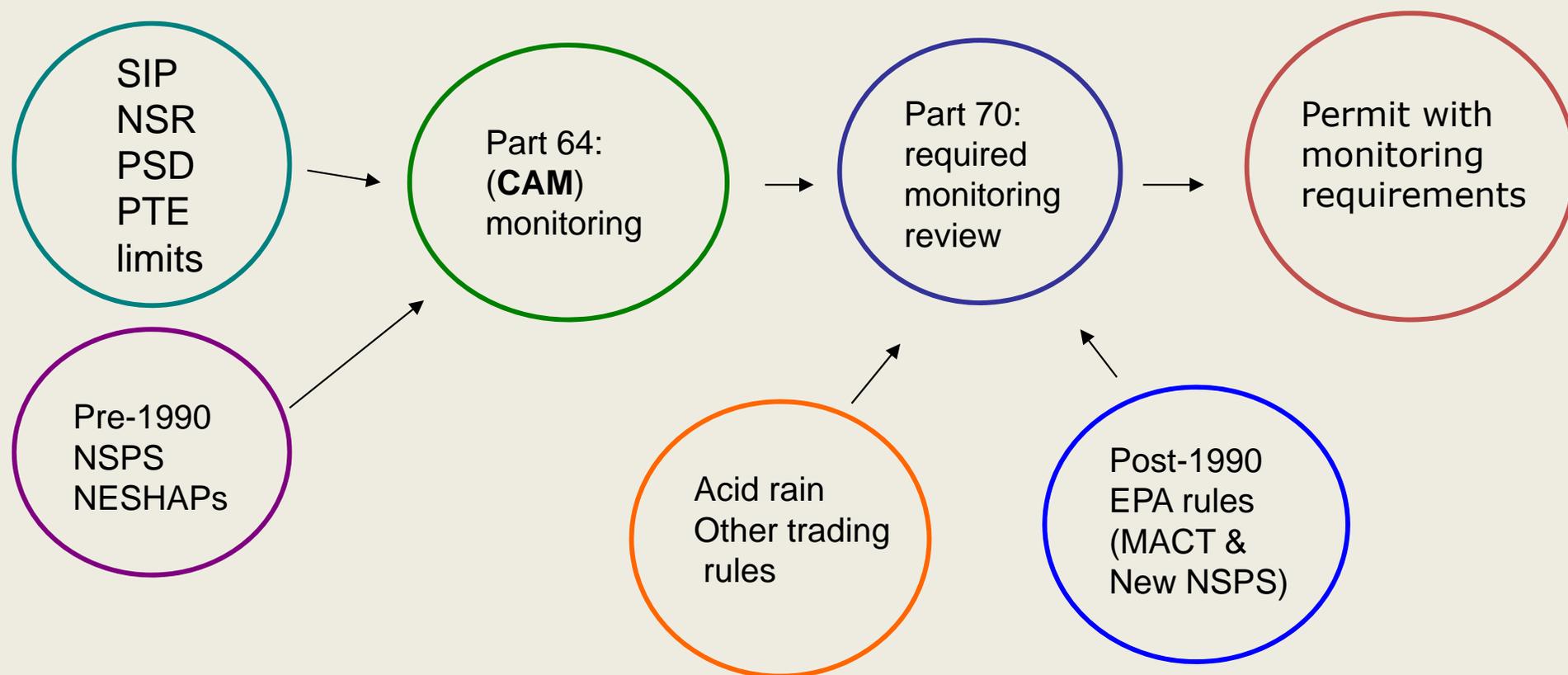
Part 64 can and often will apply where existing rule or permit already includes some monitoring:

- Data collection frequency not sufficient,
- Operational data not well related to control device efficiency characteristics,
- Indicator ranges not established or correlated with testing.

# Who is exempt from CAM?

- Exemptions are by rule type, not facility type:
  - ***Acid rain rules,***
  - ***Post-1990 EPA rules,***
  - ***Rules with continuous compliance determination methods (e.g., Da facilities for SO<sub>2</sub>),***
  - ***Rules with annual caps or emissions trading.***
- One exemption exception: Municipally-owned peaking units.

# How does CAM rule work with other rules and Title V program?



# What is required in part 70 for monitoring?

- Monitoring requirements from applicable rules including part 64, NSPS, NESHAP, SIP
- Monitoring to fill gaps
  - If applicable rule has no monitoring, no frequency, initial testing only,
  - Gap-filling monitoring to provide reliable data from relevant time period representative of compliance (70.6(a)(3)),
  - Possible adjustments to existing periodic monitoring if not sufficient to assure compliance (70.6(c)(5)(ii)) (e.g., once/term testing not really monitoring).

# What must the source owner do to get a permit?

- Develop and propose monitoring in permit application that at a minimum:
  - **Satisfies part 64, as applicable, and**
  - **Includes applicable monitoring requirements.**
- May also propose monitoring to fill gaps including applying or improving existing monitoring.

# How is the monitoring described in a permit?

Permit elements (EPA's part 64 guidance has example format):

- Description of monitoring (what is measured, how, frequency, averaging time),
- What defines excursions and consequences (e.g., excursion triggers corrective action and reporting obligation), excess emissions, deviations.
- QA/QC schedules and procedures.

## What does source owner do with monitoring results?

Use the data to assure and assess compliance with applicable requirements by:

- Operating control device(s) within designated CAM or other indicator ranges, and
- Responding to excursions, excess emissions, deviations with appropriate corrective action; and
- Operating other control measures in accordance with applicable conditions.

# GHGs -The Tailoring Rule

- Issued on May 13, 2010
- “Tailors” the requirements to focus PSD and Title V permit requirements on the largest emitting facilities
- Subjects facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources to CAA permitting requirements
  - This includes the nation’s largest GHG emitters – power plants, refineries, and cement production facilities
  - Small farms, restaurants, and commercial facilities are shielded by this rule

# Pollutants Covered

- Sets thresholds for GHG emissions, addressing emissions from six well-mixed GHGs:
  - Carbon dioxide (CO<sub>2</sub>)
  - Methane (CH<sub>4</sub>)
  - Nitrous oxide (N<sub>2</sub>O)
  - Hydrofluorocarbons (HFCs)
  - Perfluorocarbons (PFCs)
  - Sulfur hexafluoride (SF<sub>6</sub>)
- The aggregate sum of these six GHGs is the identified air pollutant in EPA's Light-Duty Vehicle Rule, and the associated Endangerment Finding and Cause or Contribute Findings
- To determine applicability, a source's GHG emissions are calculated as the sum of the six gases on a CO<sub>2</sub> equivalent (CO<sub>2</sub>e) basis and compared against the relevant threshold

# Step 1 – PSD Anyway Sources

- January 2, 2011 to June 30, 2011
- No new permitting actions due solely to GHG emissions during this time period; only sources undertaking permitting actions anyway for other pollutants will need to address GHG
  - PSD permitting applicability:
    - Sources will be subject to the PSD requirements for GHGs only if they increase GHG emissions by 75,000 tpy CO<sub>2</sub>e or more

# Step 1 – PSD Anyway Sources

- Title V permitting applicability:
  - Only those sources currently with Title V permits will address GHGs, and only when applying for, renewing or revising their permits
- No sources will be subject to CAA permitting requirements based solely on GHG emissions
- Covers sources responsible for 65% of total national stationary source GHG emissions

## Step 2 – Major for GHGs

- July 1, 2011 to June 30, 2013
- Sources subject to GHG permitting requirements under step 1 will continue to be subject to GHG permitting requirements
- In addition, sources that emit or have the potential to emit GHGs at or above 100,000 tpy CO<sub>2</sub>e will also be subject to GHG permitting requirements as follows, even if PSD is not triggered from criteria pollutants.

## Step 2 – Major for GHGs (cont'd)

- **PSD permitting applicability – triggered with construction that increases emissions**
  - A newly constructed source (which is not major for another pollutant) will not be subject to PSD unless it emits 100,000 tpy or more on a CO<sub>2</sub>e basis
  - A modification project at a major stationary source will not be subject to PSD unless it results in a net GHG emissions increase of 75,000 tpy or more on a CO<sub>2</sub>e basis
- **Title V permitting applicability**
  - A GHG emission source (which is not already subject to Title V) will not be subject to Title V unless it emits 100,000 tpy or more on a CO<sub>2</sub>e basis

## Step 2 – Major for GHGs (cont'd)

- These newly subject sources must apply within 1 year after becoming subject to the program, unless the permitting authority sets an earlier deadline.
- This means that newly subject sources must apply for a Title V permit on or before July 1, 2012 (which is one year from July 1, 2011).
- Covers sources responsible for nearly 70% of total national stationary source GHG emissions

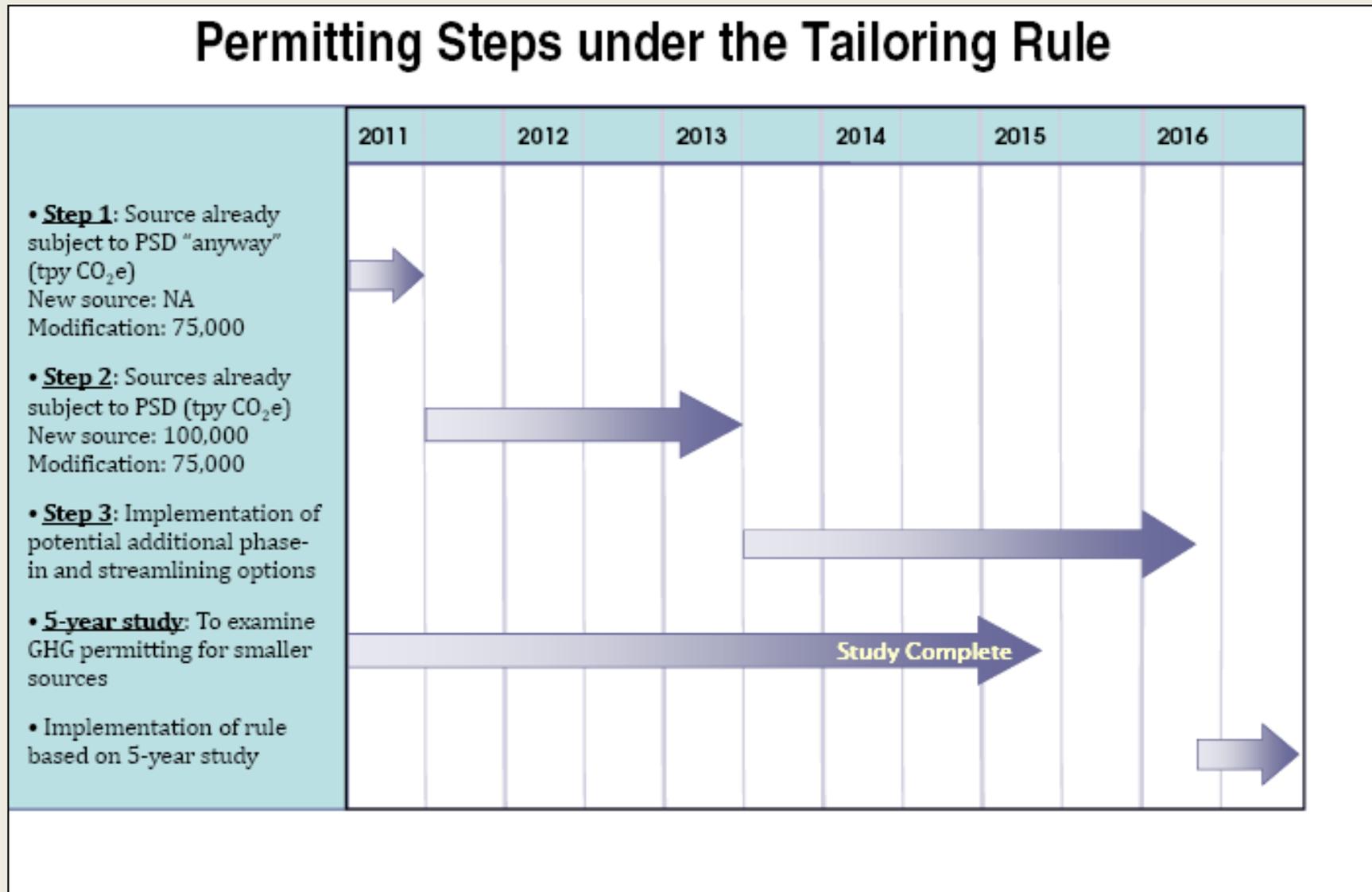
# Steps 1 and 2 GHG Permitting

- Step 1 continues on after June 30, 2011 for PSD
- Step 2 may bring in sources not previously covered by permits (e.g. gas separation plants, ethanol facilities, coal mines)
- Step 3 determines if smaller sources should be regulated

# Step 3 GHG Permitting

- Step 3 issued July 12, 2012
- Effective August 13, 2012
- U.S. EPA considered lowering thresholds but decided to maintain existing
  - 100,000 ton/yr facility
  - 75,000 ton/yr modification
- Allows PALs on a CO<sub>2</sub>e basis, not just a GHG mass basis

# Permitting Steps under the Tailoring Rule



# PSD GHG Technical Information and Guidance

- U.S. EPA guidance:  
<http://www.epa.gov/nsr/ghgpermitting.html>
- Includes Q&A's, implementation guidance, training slides, source type white papers
- Ohio EPA rule: 3745-31-34:  
[http://epa.ohio.gov/portals/27/regs/3745-77/3745-31-34\\_Final.pdf](http://epa.ohio.gov/portals/27/regs/3745-77/3745-31-34_Final.pdf)

# BioMass Exemption

- Issued on July 1, 2011
- Provides for a deferral of PSD and Title V permit processing
- Issued for three years to allow U.S. EPA time to figure out how to consider biomass sources



## Where do I get information or assistance on Title V?

- Engineering Guides
  - <http://www.epa.ohio.gov/dapc/engineer/eguides.aspx>
- Answer Place
  - <http://ohioepa.custhelp.com/app/home>
- eBusiness Center online help
  - <https://ebiz.epa.ohio.gov/PortalHelp.jsp>
- Ohio EPA TV Information
  - [http://www.epa.ohio.gov/dapc/title\\_v/titlev.aspx](http://www.epa.ohio.gov/dapc/title_v/titlev.aspx)

# Where do I get information or assistance on Title V?

- Talk to your permit writer:
  - <http://www.epa.state.oh.us/dapc/general/dolaa.aspx>
- Consultants
- Can be complex
- Work with someone experienced
- Questions?