

# Regulation XIII – New Source Review



Working Group Meeting  
August 13, 2020

**Join Zoom Meeting**

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**Meeting ID: 959 6460 6758**

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# Agenda

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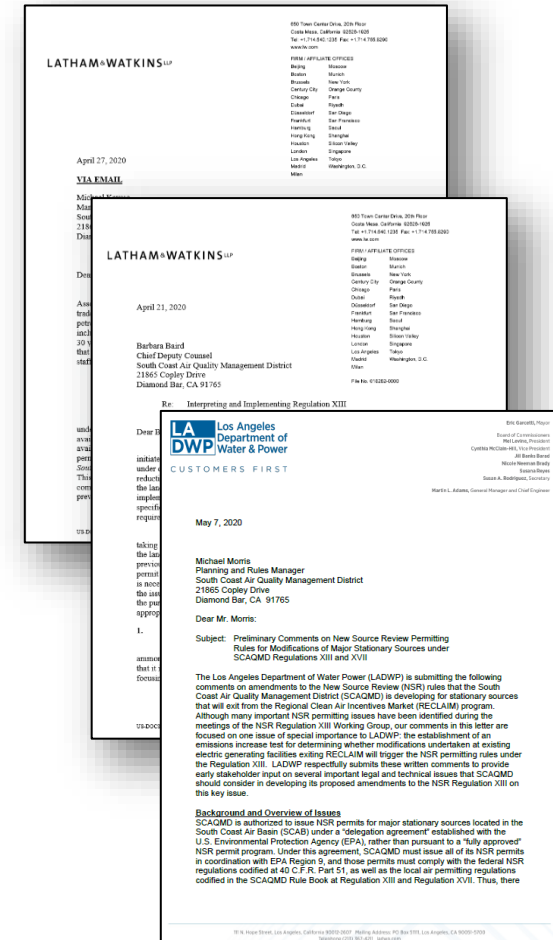
Previous Working Group Meeting Summary

Tracking NSR Issues

NSR Applicability Test

# Previous Working Group Meeting Summary

- Discussed responses to three comment letters received pertaining to Regulation XIII
- South Coast AQMD responses to these letters is available on the [Proposed Rules Page](#)
  - Two comment letters from the Regulatory Flexibility Group and the Western States Petroleum Association focused on
    - Ammonia Limits: Where, when, and how ammonia emission limits for SCR units will be established
    - PM BACT: Applicability of PM BACT requirements for modifications with SCR
  - Comment letter from LADWP focused on the NSR Applicability test

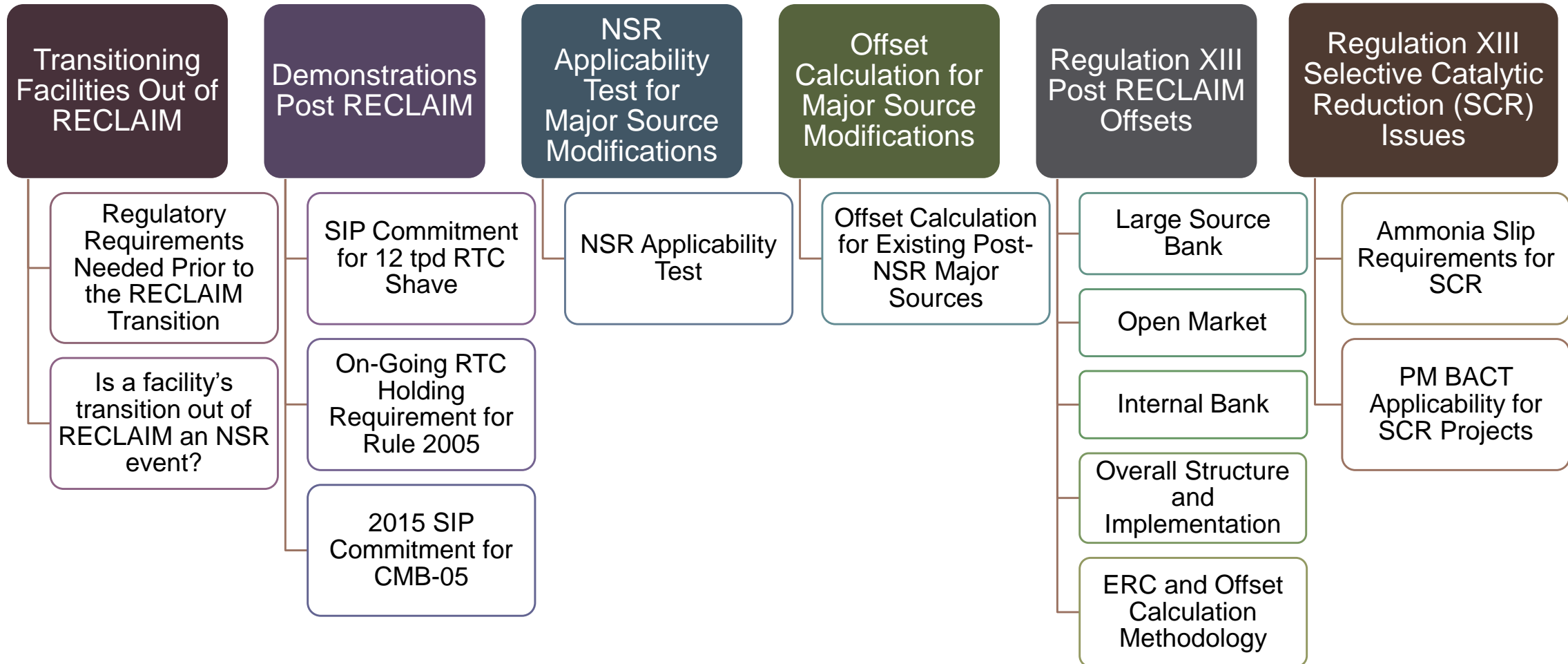


# Tracking NSR Issues

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- Through the Working Group process staff has been addressing a variety of NSR issues
- Difficult to address and resolve issues in a linear fashion
  - Complexity of certain issues require starts and stops to develop recommendations, work with U.S. EPA, gather additional data, etc.
  - As new issues are raised in the rule development process, staff will pause discussions on a certain issue to focus on the new issues
- To help track the status and the breadth of NSR issues, staff has compiled a general list of NSR issues
  - At the beginning of each Working Group, staff will provide a summary status of NSR issues
  - Providing an overall recap of the status of NSR issues today

# Overview of NSR Issues



# Transitioning Facilities Out of RECLAIM

- Staff discussed with the Working Group that U.S. EPA has recommended and staff agrees that facilities will stay in RECLAIM until the three regulatory programs are approved into the SIP:
    - Command-and-control BARCT landing rules
    - Regulation XX – RECLAIM
    - Regulation XIII – New Source Review
  - Staff has discussed with the Working Group that U.S. EPA agrees with staff that the transition of a facility from RECLAIM to command-and-control is not an NSR event
    - Rule 2005 applies when in RECLAIM
    - Regulation XIII applies when out of RECLAIM
- Status of both issues: Complete, no further action

## Transitioning Facilities Out of RECLAIM

Regulatory Requirements Needed Prior to the RECLAIM Transition ✓

Is a facility's transition out of RECLAIM an NSR event? ✓

# Demonstrations Post RECLAIM

- SIP commitment for 12 tpd RTC shave
  - U.S. EPA recommended and staff agreed that a one-time programmatic equivalency with the SIP submittal package for the RECLAIM transition
  - If actual emissions are > 14.5 tons per day, then emission projections with implementation of landing rules with future effective dates can be used to project actual emissions
- On-going RTC holding requirements for Rule 2005
  - Staff had initial discussions with CARB, but needs final confirmation that a one-time post-RECLAIM demonstration satisfies SB288 requirements for Rule 2005 NSR holding requirements
- 2016 SIP commitment for CMB-05
  - U.S. EPA concurred that no demonstration was needed for the additional 5 tons per day that will be achieved through implementation of command-and-control rules
- Status:
  - SIP issues for the 12 tpd RTC shave and CMB-05 are complete, no further action
  - Staff is working with CARB regarding on-going RTC holding requirements

## Demonstrations Post RECLAIM

SIP Commitment for 12 tpd RTC Shave ✓

On-Going RTC Holding Requirement for Rule 2005

2015 SIP Commitment for CMB-05 ✓

# NSR Applicability Test for Major Source Modifications

NSR  
Applicability  
Test for  
Major Source  
Modifications

NSR Applicability  
Test

- At the June Working Group meeting, staff discussed a revised approach for the NSR applicability test
- At today's Working Group meeting, staff will discuss
  - Additional refinements to the NSR applicability test and
  - Additional details and other requires to satisfy the federal NSR applicability test
- Staff will propose recommendations after input from the Working Group and additional discussions with U.S. EPA
- Status: Still under development



# Offset Calculation for Major Source Modifications

Offset Calculation for Major Source Modifications

Offset Calculation for Existing Post-NSR Major Sources ✓

- Offset calculation methodology for major sources has been discussed at various Working Group meetings
  - U.S. EPA and staff agreed on the following offset calculation for existing post-NSR major sources:
    - First Tier: Allow use of PTE-to-PTE when
      - Actual emissions are at least 80% of the PTE; or
      - Past emission increases were fully offset less than 5 years prior to an application deemed complete\*
    - Second Tier: Require Actual Emissions-to-PTE for all other situations
- Status: Complete, no further action

\* Pending approval by U.S. EPA's Office of General Counsel

# Regulation XIII Post RECLAIM Offsets

- Staff has discussed at Working Group meetings the current supply and demand for offsets in the Open Market and Internal Bank
  - Initial concepts for the Large Source Bank were discussed at the May Working Group meeting
  - At today's Working Group meeting, staff will discuss initial concepts for the overall structure and implementation approach
  - Additional discussions are needed for details of the Large Source Bank, Open Market, Internal Bank, and ERC and Offset Calculation Methodology
- Status: All issues under this category are still under development

Regulation XIII  
Post RECLAIM  
Offsets

Large Source  
Bank

Open Market

Internal Bank

Overall Structure  
and  
Implementation

ERC and Offset  
Calculation  
Methodology

# Regulation XIII SCR Issues

## Regulation XIII Selective Catalytic Reduction (SCR) Issues

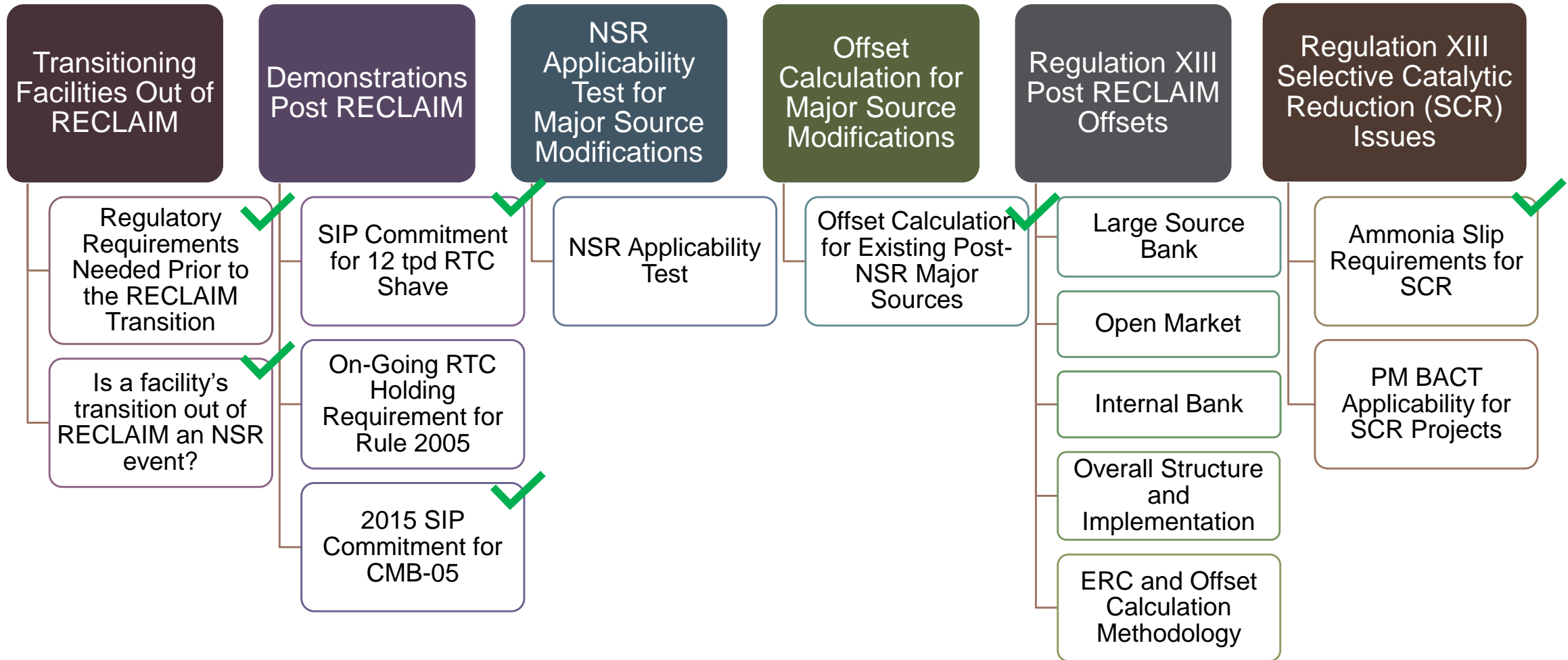
- At the June Working Group meeting staff discussed ammonia slip limits and explained that:
  - Ammonia BACT limits for SCR will be addressed during permitting since this is an NSR issue
  - Staff intends to remove the ammonia slip limits in the rules where ammonia limits were included
- Staff discussed PM BACT for refinery gas SCR projects at the June Working Group meeting
  - Staff is continuing to work with U.S. EPA on this issue

Ammonia Slip  
Requirements for  
SCR ✓

PM BACT  
Applicability for  
SCR Projects

- Status:
  - Ammonia BACT limits will be addressed through NSR, no further action
  - Staff is working with U.S. EPA on PM BACT issues for refinery gas SCR projects

# Summary of Status of NSR Issues



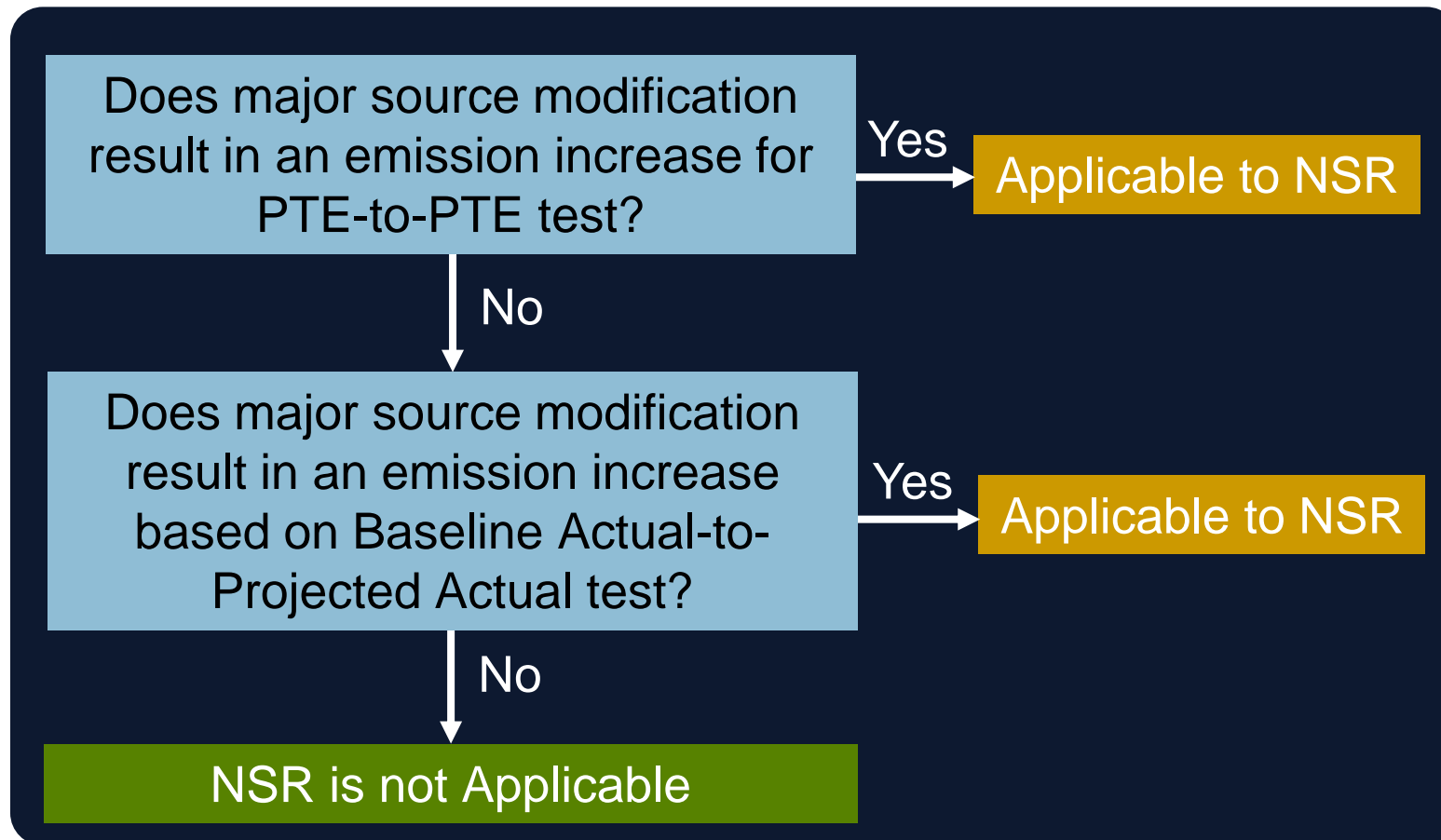
# NSR Applicability Test for Major Source Modifications

# Background

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- At the June Working Group Meeting staff introduced a concept for a two-tier NSR applicability test for major source modifications
- Today staff will be discussing
  - Refinements to the NSR applicability test for major source modifications
  - Provisions to ensure the federal NSR applicability test for major source modifications is enforceable
  - Other elements of the federal NSR applicability test for major source modifications that were not discussed

# Proposed NSR Applicability Test for Major Source Modifications Presented at the June Working Group Meeting



- First applicability test is PTE-to-PTE
- Ensures no backsliding under SB 288 since the PTE-to-PTE applicability test is layered with the federal applicability test
- Still incorporates the Baseline Actual-to-Projected Actual applicability test consistent with NSR Reform rules

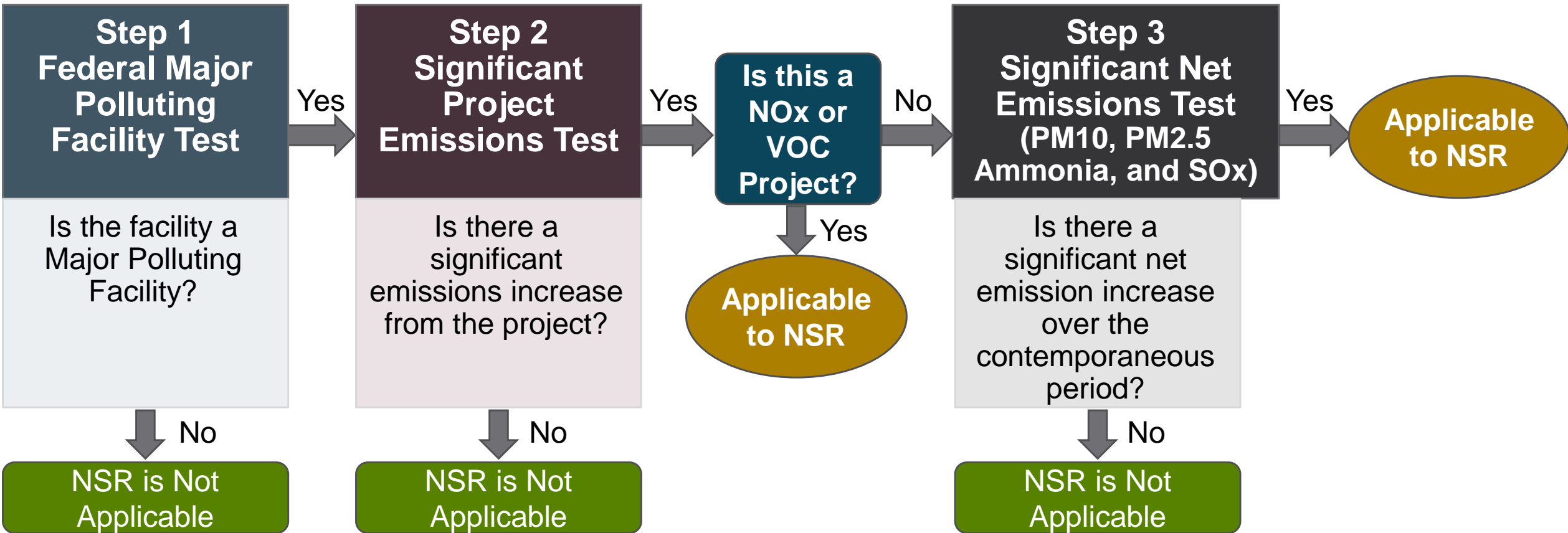
# Refinements to the NSR Applicability Test for Modification to Existing Post-NSR Major Source

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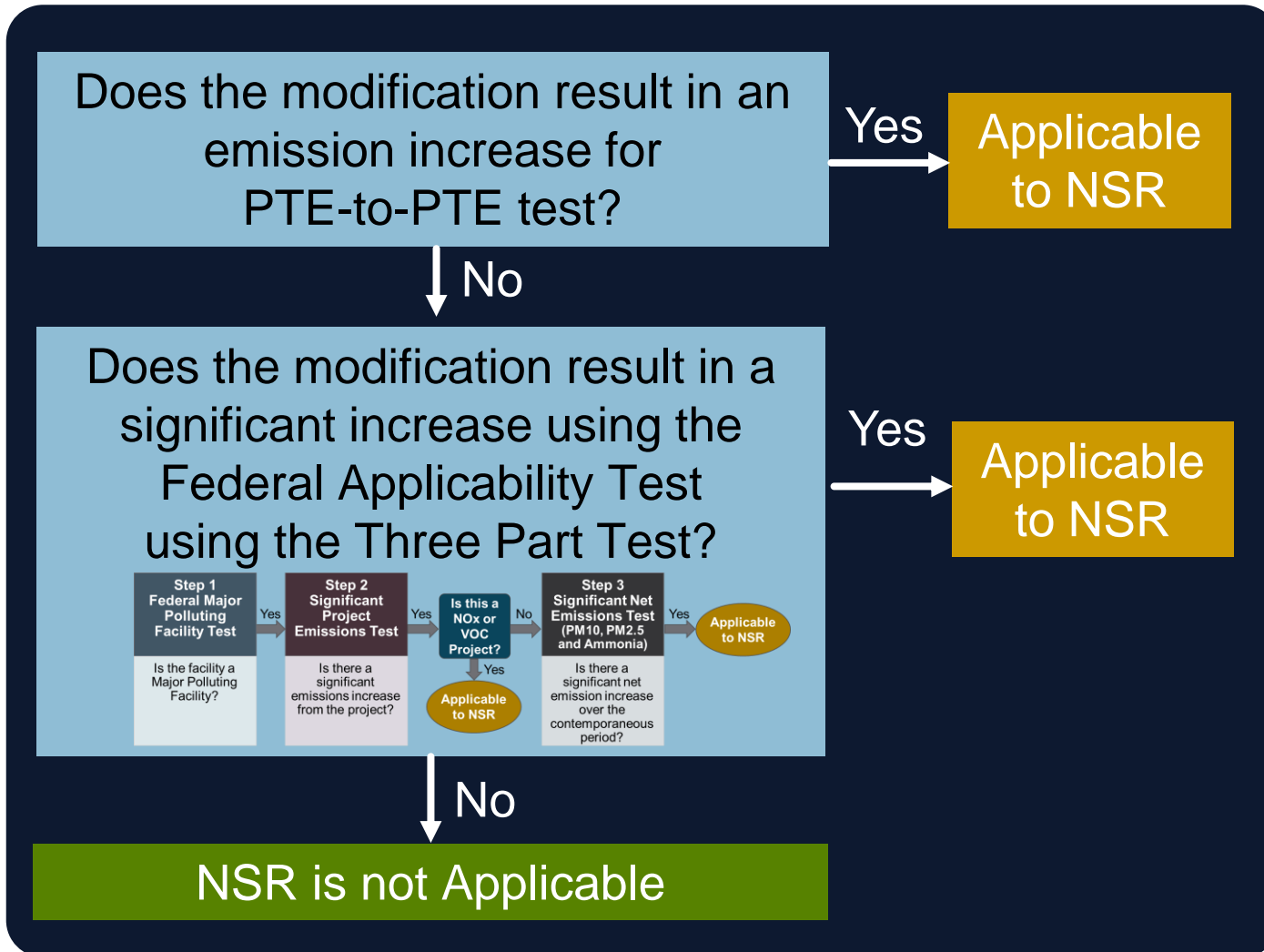
- The second tier of the proposed NSR applicability test was added to satisfy federal NSR requirements
- U.S. EPA commented that the second tier of the NSR applicability test can be based on federal thresholds for determining a Major Source Modification
- To reduce the complexity of the Federal Applicability Test staff has developed an implementation approach that will:
  - Streamline implementation to avoid having to prepare and analyze information that is not needed
  - Maintain all the elements of the Federal Applicability Test



# Federal Major Modification Applicability Test – Three Component Test



# Proposed NSR Applicability Test for Major Source Modifications



- First applicability test retains the method of current Regulation XIII
- First test is expected to capture most NSR projects
- The Federal Applicability Test will use the NSR Reform calculation method and federal thresholds

# Step 1: Determine if the Facility is a Federal Major Polluting Facility

- Purpose is to determine if the facility is a Major Polluting Facility under the federal definition
- If facility emissions are less than the Major Polluting Facility Thresholds, the permitting action is not applicable to NSR
- Federal Major Polluting Facility is pollutant specific\*

\* Note this is different than implementation of Regulation XIII where if a facility is a major polluting facility for one pollutant they are a major polluting facility for all pollutants.

## Discussion Topics



Federal Thresholds for Defining a Major Polluting Facility



Emission Sources Included in Facility Emissions



Federal Exclusions for Major Modifications

# Thresholds for Major Polluting Facility



Federal Thresholds for Defining a Major Polluting Facility

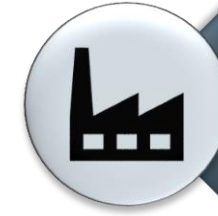
- Since this is a federal test, U.S. EPA agrees that the federal thresholds can be used for determining if a facility is a Major Polluting Facility
- Federal thresholds for PM10 are different than Regulation XIII
  - PM10 threshold will increase from 70 to 100 tons per year

• **Recommendation:** Use the Federal NSR thresholds for Major Polluting Facility

Major Polluting Facility (tons/year)*	
Pollutant	Federal NSR
NOx	10
VOC	10
PM10	100
PM2.5	70
Ammonia	70
SOx	70

\* Thresholds differ for Salton Sea Air Basin and Mojave Desert Air Basin

# Emission Sources Included in Facility Emissions



Emission Sources  
Included in Facility  
Emissions

- There are two areas where the federal definition for Major Polluting Facility differs from Regulation XIII
  - Fugitive emission sources
  - Mobile Sources
- Federal definition for Major Polluting Facility requires facilities' fugitive emissions from the 27 listed industry categories to be included\* (See next slide for 27 industry categories)
- Federal definition for Major Polluting Facility which references Stationary Sources does not include the following mobile sources as part of the facility
  - Internal combustion engines for transportation purposes
  - Nonroad engines or vehicles

## Regulation XIII

- Regulation XIII requires all facilities to include fugitive emissions
- BACT Guidelines requires that the following mobile sources be considered as part of the facility
  - In-plant vehicles
  - Ship emissions during loading and unloading
  - Non-propulsion ship emissions within South Coast AQMD jurisdiction

\* The analysis for project and net emissions requires all facilities to include fugitive emissions

# 27 Industry Categories that Must Account for Fugitive Emissions



Emission Sources  
Included in Facility  
Emissions

- (1) Coal cleaning plants (with thermal dryers);
- (2) Kraft pulp mills;
- (3) Portland cement plants;
- (4) Primary zinc smelters;
- (5) Iron and steel mills;
- (6) Primary aluminum ore reduction plants;
- (7) Primary copper smelters;
- (8) Municipal incinerators capable of charging more than 250 tons of refuse per day;
- (9) Hydrofluoric, sulfuric, or nitric acid plants;
- (10) Petroleum refineries;
- (11) Lime plants;
- (12) Phosphate rock processing plants;
- (13) Coke oven batteries;
- (14) Sulfur recovery plants;
- (15) Carbon black plants (furnace process);
- (16) Primary lead smelters;
- (17) Fuel conversion plants;
- (18) Sintering plants;
- (19) Secondary metal production plants;
- (20) Chemical process plants—The term chemical processing plant shall not include ethanol production facilities that produce ethanol by natural fermentation included in NAICS codes 325193 or 312140;
- (21) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
- (22) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
- (23) Taconite ore processing plants;
- (24) Glass fiber processing plants;
- (25) Charcoal production plants;
- (26) Fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input; and
- (27) Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.

# Federal Definition of Major Modification Includes Exclusions



## Federal Exclusions for Major Modifications

- Federal definition of Major Modification includes exclusions for:
  - Use of an alternative fuel or raw material by reason of an order\*;
  - Use of an alternative fuel by reason of an order or rule under Section 125 of the Act;
  - Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste;
  - Use of an alternative fuel or raw material by a stationary source which:
    - The source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975<sup>^</sup>; or
    - The source is approved to use under any permit issued under 40 CFR 51.165
- If a facility meets the exclusion for Major Modification, the permitting action would not be applicable to NSR

\* Any order under section 2 (a) and (b) of the Energy Supply and Environmental Coordination Act of 1974 (or any superseding legislation) or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;

<sup>^</sup> Pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR subpart I or 40 CFR 51.166

# Step 2: Is There a Significant Emissions Increase from the Project

- Purpose of Step 2 is to determine if the project itself will result in a Significant Emissions Increase under the federal definition
- If Project Emissions are greater than or equal to the Federal Significant Emissions Thresholds, then the Significant Net Emissions test (Step 3) is needed to determine if the permitting action is applicable to NSR
- “Project Emissions” are the sum of all emissions from project components that are related to the primary permitting project

$$\text{Project Emissions} = \sum \text{Component Project Emissions}$$

## Discussion Topics



Federal Thresholds for Defining a Significant Emissions Increase

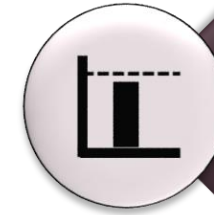


Project Emissions



Calculation Methodology and Approach



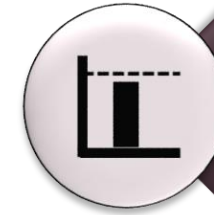


# Significant Emission Thresholds

- The Significant Emissions Thresholds are used for:
  - The Significant Project Emissions Test (Step 2)
  - The Significant Netting Emissions Test (Step 3)
- The federal thresholds for NO<sub>x</sub>, VOC, PM<sub>10</sub> and PM<sub>2.5</sub> are different than Regulation XIII
  - NO<sub>x</sub>, VOC thresholds will decrease from 1 lb/day to 0.5 lb/day
  - PM<sub>10</sub> threshold will increase from 1 lb/day to 15 tons/year
  - PM<sub>2.5</sub> threshold will increase from 1 lb/day to 10 tons/year
- No change for ammonia threshold

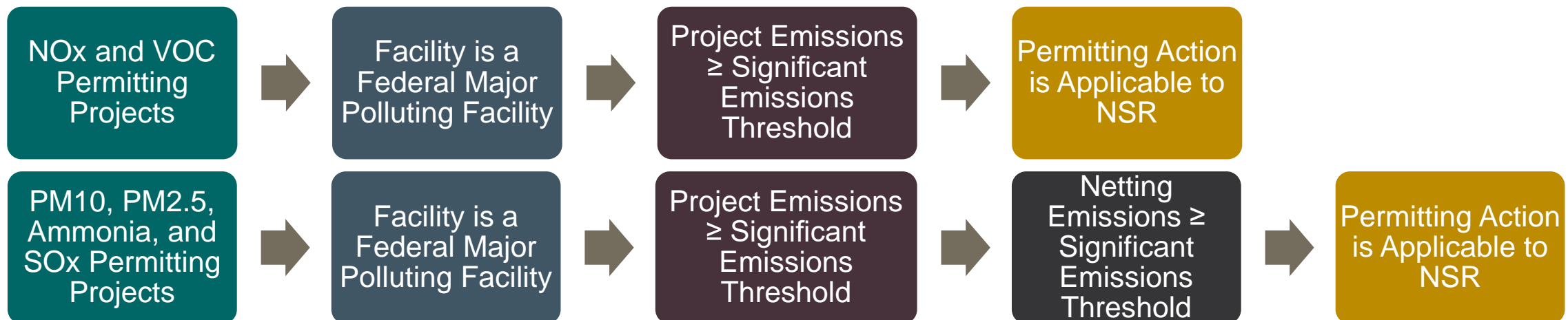
## Significant Emission Thresholds<sup>2</sup>

Pollutant	Regulation XIII	Federal NSR
NO <sub>x</sub>	1 lb/day	0.5 lb/day
VOC	1 lb/day	0.5 lb/day
PM <sub>10</sub>	1 lb/day	15 tons/year
PM <sub>2.5</sub>	1 lb/day	10 tons/year
SO <sub>x</sub>	40 tons/year	40 tons/year
Ammonia	40 tons/year	40 tons/year



# Significant Emission Thresholds

- Project Emissions are compared to the Significant Emissions Thresholds to determine if the increase exceeds the thresholds
- Since the Basin is extreme nonattainment for ozone, this is the last step in determining if a NO<sub>x</sub> or VOC permitting action is applicable to NSR
- PM<sub>10</sub>, PM<sub>2.5</sub>, Ammonia, and SO<sub>x</sub> permitting actions will need to conduct the Netting Emissions Test (Step 3) to determine NSR applicability



# Project Emissions



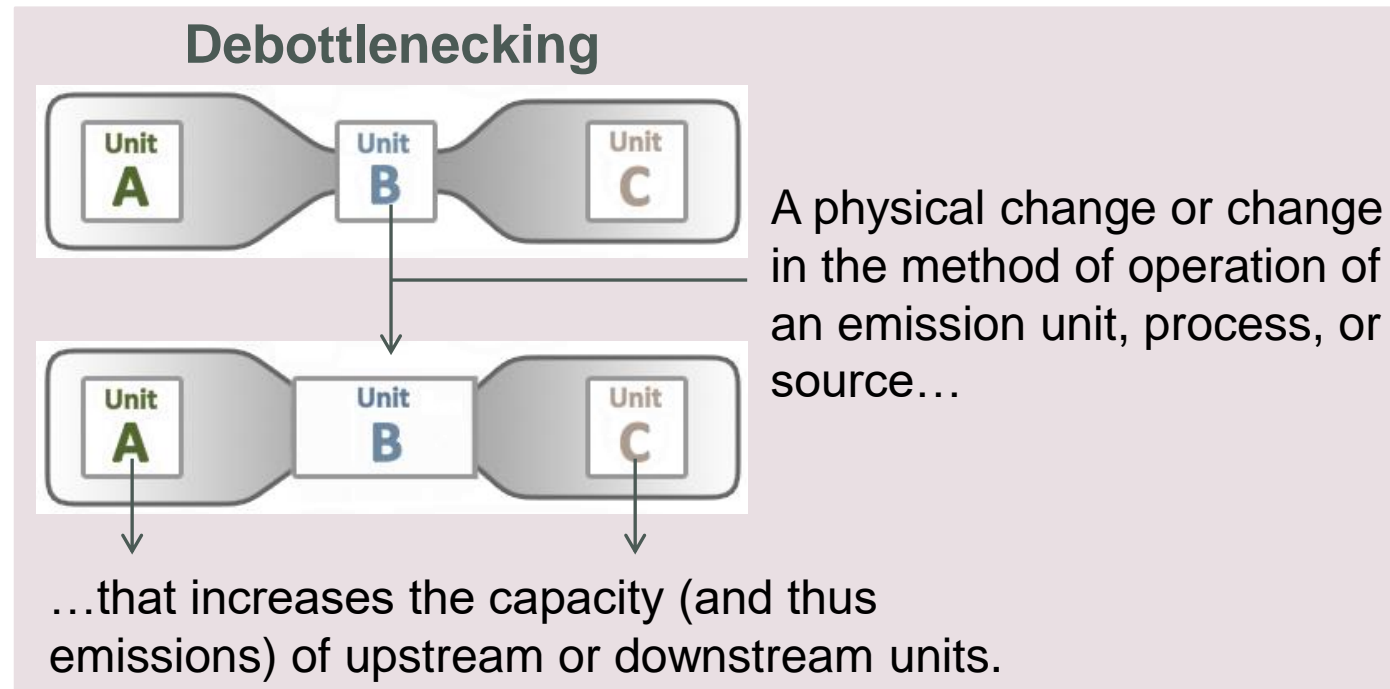
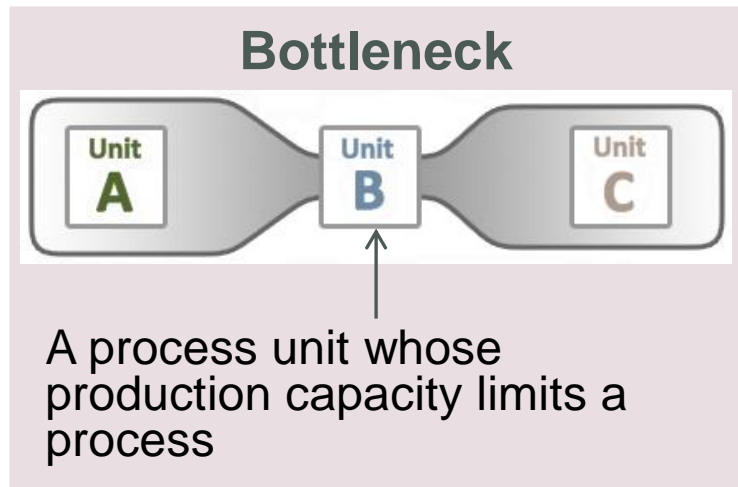
- U.S. EPA defines the “project” as a physical change in, or change in the method of operation of, an existing major polluting facility [40 CFR 165.(a)(1)(xxxix)]
  - Ensures that nominally-separated projects at a facility are treated as a single project
  - If a project has multiple emission sources, the increases of each individual emission source are added together to determine if the project as a whole has a Significant Emissions Increase
  - Project emissions include all new, modified, and de-bottlenecking units
  - In general aggregated projects includes activities that are substantially related, including technical or economic dependence, and that generally occur within three years of each other
  - Aggregate projects would be evaluated on a case-by-case basis

## Difference Between Federal NSR Applicability and Regulation XIII

- Regulation XIII permits are issued for each individual source or unit
- Regulation XIII does not include emission increases from other permitting or non-permitting actions



# Debottlenecking



- Debottlenecked emissions must be added to a project's emission increases\*
  - Add difference to emission increases from debottlenecked units (e.g., Unit A and/or Unit C) and other modified units (e.g., Unit B)

\* Note that BACT applies only to the units actually being modified

# Should Project Emissions Include Emission Decreases in Step 2?



Project Emissions  
(Emission Decreases)

- For NO<sub>x</sub> and VOC, project-specific decreases cannot be accounted for in Project Emissions\*
- For other pollutants, NSR regulation language is uncertain if project-specific decreases can be accounted for in Project Emissions
  - At this time it is uncertain if emissions decreases will be included in the Project emissions - Final Rule is expected in Fall 2020
- If emission decreases are not included in Step 2, the Net Emissions Increase (Step 3), will account for emission increases and decreases



Historically some agencies' (including EPA's) reviews pre-2018 concluded that decreases should not be included



EPA's March 2018 Memo regarding project emission accounting said – decreases can now be included



Proposed Rule (84 FR39244, 8/9/2019) says decreases should be included



Uncertain at this time – Awaiting U.S. EPA final Rule – expected in Fall 2020

\* EPA's March 2018 Memo does not apply to NO<sub>x</sub> and VOC because the basin is extreme nonattainment for ozone



# Calculating Project Emissions

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- Under the Federal NSR Applicability test, Project Emissions are evaluated differently depending on when the source began operation
- Since the Federal NSR Applicability test looks at all increases from sources within a “project” the appropriate test must be performed for each type of source when there are multiple affected sources within a project
- Project emissions will be the sum of all project components
- The calculation methodology for each project component depends on when the source began operating

# Approach for Calculating Project Emissions



- If the emission unit within the project began operation < 24 months, then the Component Project Emissions for that unit are determined based on PTE-to-PTE:

$$\text{Component Project Emissions (< 24 Months)} = \text{PTE (post-modification)} - \text{PTE (pre-modification)}$$

- If the emission unit within the project began normal source operation ≥ 24 months, then the Component emissions for that unit are determined based on either Baseline Actual-to-Projected Actual OR Baseline Actual-to-PTE:

$$\text{Component Project Emissions (≥ 24 Months)} = \text{Projected Actual Emissions} - \text{Baseline Actual Emissions}$$

**OR**

$$\text{Component Project Emissions (≥ 24 Months)} = \text{PTE (post-modification)} - \text{Baseline Actual Emissions}$$

Note: The Baseline Actual-to-PTE test should be used first as this is a simpler analysis than the Baseline Actual-to-Projected Actual test

# Three Scenarios for Calculating Project Emissions



Scenario	Project Emissions Calculation Methodology
All units within the component projects began operating < 24 months	$\text{Project Emissions} = \sum \left[ \text{Component Project Emissions } (< 24 \text{ Months}) \right]$ <p style="text-align: center;"> <span style="background-color: #92d050; padding: 2px;">PTE (post-modification)</span> - <span style="background-color: #92d050; padding: 2px;">PTE (pre-modification)</span> </p>
All units within component projects began operating ≥ 24 months	$\text{Project Emissions} = \sum \left[ \text{Component Project Emissions } (\geq 24 \text{ Months}) \right]$ <p style="text-align: center;"> <span style="background-color: #d3d3d3; padding: 2px;">Projected Actual Emissions</span> - <span style="background-color: #d3d3d3; padding: 2px;">Baseline Actual Emissions</span>  <b>OR</b>  <span style="background-color: #92d050; padding: 2px;">PTE (post-modification)</span> - <span style="background-color: #d3d3d3; padding: 2px;">Baseline Actual Emissions</span> </p>
Units for the component projects have a combination < 24 and ≥ 24 months	$\text{Project Emissions} = \sum \left[ \text{Component Project Emissions } (< 24 \text{ Months}) \right] + \sum \left[ \text{Component Project Emissions } (\geq 24 \text{ Months}) \right]$ <p style="text-align: center;"> <span style="background-color: #92d050; padding: 2px;">PTE (post-modification)</span> - <span style="background-color: #92d050; padding: 2px;">PTE (pre-modification)</span> </p> <p style="text-align: center;"> <span style="background-color: #d3d3d3; padding: 2px;">Projected Actual Emissions</span> - <span style="background-color: #d3d3d3; padding: 2px;">Baseline Actual Emissions</span>  <b>OR</b>  <span style="background-color: #92d050; padding: 2px;">PTE (post-modification)</span> - <span style="background-color: #d3d3d3; padding: 2px;">Baseline Actual Emissions</span> </p>



# Overview of Projected Actual Emissions



$$\text{Projected Actual Emissions} = \left[ \text{Maximum Projected Emissions} - \text{Demand Growth} \right]$$

- Projected Actual Emissions are the difference between the Maximum Projected Emissions and Demand Growth
  - This is a more complex analysis than the Baseline Actual-to-PTE test
- If the Baseline Actual-to-PTE test is above the Significant Emissions Thresholds, then the Baseline Actual-to-Projected Actual test should be used
- To streamline implementation of estimating Projected Actual Emissions, staff is recommending a hierarchy with two levels
  - Level 1: Project Emissions that do not exclude Demand Growth
  - Level 2 (if needed): Projected Emissions that exclude Demand Growth

# Two-Level Hierarchy for Projects with Components $\geq 24$ Months



- **Level 1:** If Project Emissions excluding Demand Growth are below the Significant Emissions Threshold, then the permitting action is not applicable to NSR
  - If Projected Emissions excluding Demand Growth  $\geq$  Significant Emission Threshold, then go to Level 2

$$\text{Project Emissions (w/out Demand Growth)} = \overset{\text{Post-Modification}}{\text{Maximum Projected Emissions}} - \overset{\text{Pre-Modification}}{\text{Baseline Actual Emissions}}$$

- **Level 2:** If Project Emissions with the Demand Growth exclusion are below the Significant Emissions Threshold, then the permitting action is not applicable to NSR
  - If Projected Emissions with Demand Growth exclusion  $\geq$  Significant Emission Threshold, then must conduct the net emissions increase analysis (Step 3) to determine if the permitting action is applicable to NSR

$$\text{Project Emissions (with Demand Growth)} = \left[ \overset{\text{Post-Modification}}{\text{Maximum Projected Emissions}} - \text{Demand Growth} \right] - \overset{\text{Pre-Modification}}{\text{Baseline Actual Emissions}}$$



# Overview of Baseline Actual Emissions

## How Calculated

- Average annual emissions for any consecutive 24 months during past:
  - Five years for Electricity Generating Facilities (EGFs)
  - Ten years for non-EGFs
- Same 24-month period per pollutant – can use a different 24-month period for other pollutants

## What is Included in Baseline Actual Emissions

- All stationary emissions for each project source, including fugitive and startup/shutdown/malfunction emissions
- Must exclude emissions in violation of permit or regulatory limits

## Downward Adjustments to Meet Current Regulations (Non-EGFs Only)

- Exclude emissions that would have exceeded an emission limit under current regulation for the consecutive 24-months
- Not applicable if part of a Maximum Achievable Control Technology standard, provided state has not taken credit for reductions in an attainment demonstration or maintenance plan

# When Timeframe Begins for Evaluating Baseline Actual Emissions



- Under Federal NSR, the reference point for establishing the timeframes varies:
  - For EGFs, count from the beginning of actual construction of the project
  - For non-EGFs, count from the earlier of the following:
    - Beginning actual construction of the project, or
    - The date a permit application is deemed complete
- Estimating the beginning of construction can be challenging and can create permitting delays if the 24 consecutive months falls outside of the 5 or 10 year timeframe
- **Recommendation:** The reference point for the timeframe for selecting baseline emissions will be based on the date a permit is deemed complete for sources in the project, and construction date for Step 3 sources

# Overview of Maximum Projected Emissions



$$\text{Projected Actual Emissions} = \left[ \text{Maximum Projected Emissions} - \text{Demand Growth} \right]$$

- Maximum projected emissions is the maximum annual rate (tpy) at which an emissions unit is projected to emit a pollutant in:
  - Any one of the 5 years following the date the unit resumes regular operation, or
  - Any one of the 10 years following the above date if the project involves an increase in the unit's design capacity or PTE and full utilization of the unit would result in a significant emissions increase or significant net emissions increase at the source
- Includes fugitive emissions and emissions associated with startup, shutdown, or malfunctions
- Projected emissions must have a business forecast as the basis



# Demand Growth Exclusion

$$\text{Projected Actual Emissions} = \left[ \text{Maximum Projected Emissions} - \text{Demand Growth} \right]$$

- Projected Actual Emissions allows for a Demand Growth exclusion
- The Demand Growth exclusion removes emission increases associated with the facility's output that would have occurred regardless of the modification
- Demand Growth exclusions are allowed for:
  - The emissions that an existing source could have accommodated during the consecutive 24-month period used to establish the baseline actual, including any increased utilization due to product demand growth, if
  - The emissions are unrelated to the particular project
- Facility must justify and substantiate such exclusions, initial concepts include:
  - Demand growth claims need to be substantiated with historical operation data
  - Must demonstrate that source actually achieved emission level for specified time period

# Information Used for Projected Actual Emissions



$$\text{Projected Actual Emissions} = \left[ \text{Maximum Projected Emissions} - \text{Demand Growth} \right]$$

- Federal NSR requires that Maximum Projected Emissions and Demand Growth exclusion must be supported with the following relevant information
  - Historical operational data
  - Company's own representations
  - Company's expected business activity
  - Company's highest projections of business activity
  - Company's filings with the State or Federal regulatory authorities, and
  - Compliance plans under the approved State Implementation Plan

# Initial Concepts for Bounding Projected Actual Emissions



Make the projected actual emissions a permit limit so that it is enforceable

Future business activity estimates to be based on publicly available information

- Estimates must be stockholder prospects, business loans, or other business information generated independently of Projected Actual Emission determination

If appropriate, projected actual emissions are not provided by the applicant, then the emission increase is calculated as Baseline Actual-to-PTE

- If Baseline Actual-to-PTE is used instead of Baseline Actual-to-Projected Actual, then recordkeeping and reporting obligations for “Reasonable Possibility” provisions can be avoided (discussion later)



# Federal Monitoring, Recordkeeping and Reporting Requirements – Reasonable Possibility Provisions

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- Administrative obligations under reasonable possibility provisions would apply if:
  - Baseline Actual-to-Projected Actual method is used, and
  - Project is not a major modification, and
  - Project  $\geq 50\%$  of the significant emission thresholds (before demand growth exclusion)
- Can avoid such administrative obligations by using post-modification PTE instead of Projected Actual Emissions

# Federal Monitoring, Recordkeeping and Reporting Requirements – Reasonable Possibility Provisions

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If increase  $\geq 50\%$  of significance level without applying Demand Growth Exclusion, applicant must document basis for non-applicability determination

- Description of the project
- Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and
- Details of applicability test used to determine that the project is not a major modification including:
  - Baseline actual emissions
  - Projected actual emissions
  - Amount of emissions excluded and an explanation for why such amount was excluded
  - Any netting calculations, if applicable

# Federal Monitoring, Recordkeeping and Reporting Requirements – Reasonable Possibility Provisions (*cont.*)

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## If increase still $\geq 50\%$ of significance level with Demand Growth Exclusion

- For EGFs, before beginning actual construction, submit project information and applicability test to the reviewing authority
- Maintain a record of the annual emissions for a period of 5 years (or 10 years if the project increases the design capacity or PTE) following resumption of regular operations after the change
  - For EGFs, submit a report to the reviewing authority within 60 days after the end of each year during which records are required (5 or 10 years)
  - Non-EGFs, submit a report if the actual annual emissions shows that the project result in significant emission increase, and if such emissions differ from the preconstruction projection

# Step 3: Significant Net Emissions Test

- Purpose of Step 3 is to determine if emission increases and decreases at the facility during the contemporaneous period is less than the Significant Emissions Threshold
- Step 3 is only applicable for PM10, PM2.5, Ammonia, and SOx
- If Net Emissions during the contemporaneous period are greater than or equal to the Significant Emissions Thresholds, then the permitting action is applicable to NSR

## Discussion Topics



Netting Method



Contemporaneous  
Window



Other Creditable  
Emission Increases and  
Decreases

# Netting Method



- Determine the net emissions increase from the Major Polluting Facility as a whole and compare to the Significant Emissions Thresholds
  - Uses the same Significant Emission Thresholds as the Project Emissions
- PM10, PM2.5, Ammonia, and SOx projects can **net out** of being a “major modification” if the **net emission increase** is less than the Significant Emission Thresholds
- Since the Basin is designated as extreme non-attainment for ozone, netting is **not allowed** for VOC and NOx

Net Emission  
Increase

=

Project  
Emissions

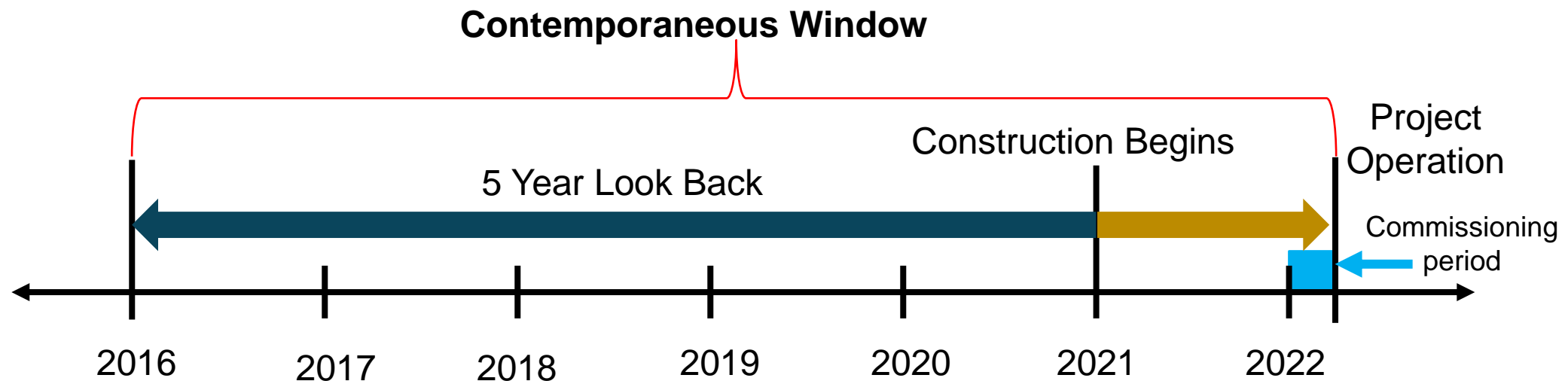
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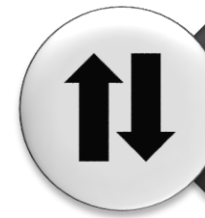
Sum of Emission Increases and Decreases  
Over Contemporaneous Period



# Contemporaneous Window

- Contemporaneous period includes a “look back” and “look forward” period
- Look back period begins five years before the date construction of the (current) project commences
- Look forward period begins from the date of construction of the (current) project to the date that the increase from the (current) project occurs
  - For a replacement unit that requires shakedown, this may include a reasonable shakedown period, not to exceed 180 days





# Netting Method

$$\text{Net Emission Increase} = \text{Project Emissions} + \text{Sum of Emission Increases and Decreases Over Contemporaneous Period}$$

- Net emissions increases is the sum of the project emissions and the sum of the emission increases and decreases over the contemporaneous period
- If the emission source of the unit within the project began operation < 24 months, then

$$\text{Contemporaneous Project Emissions (< 24 Months)} = \text{PTE (post-modification)} - \text{PTE (pre-modification)}$$

- If the emission source of the unit within the project began normal source operation  $\geq 24$  months, then:

$$\text{Contemporaneous Project Emissions (\geq 24 Months)} = \text{PTE (post-modification)} - \text{Baseline Actual Emissions}$$

Note: For Netting (Step 3) Baseline Actual-to-PTE test can only be used to estimate emission increases

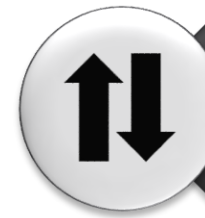
# Creditable Increases and Decreases



Other Creditable  
Emission Increases and  
Decreases

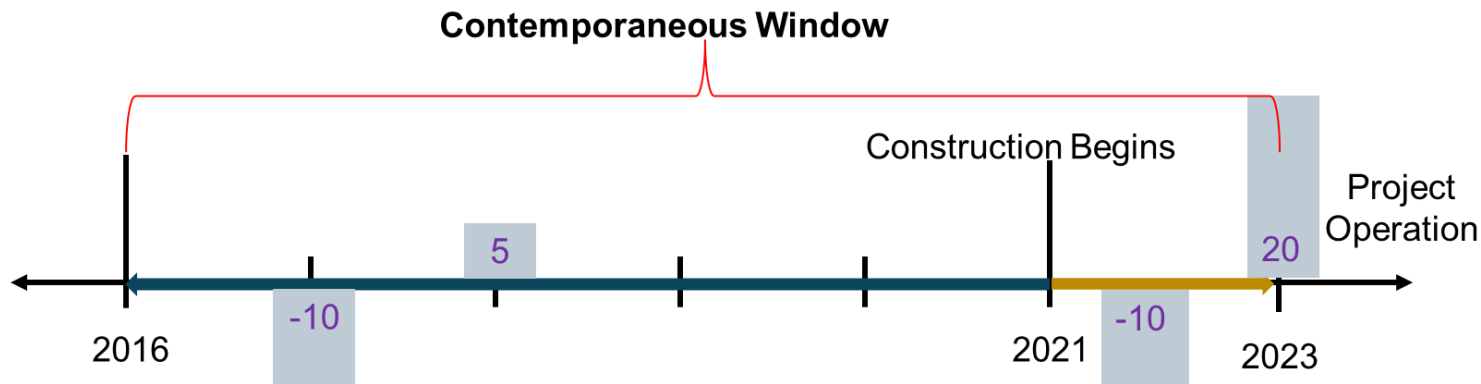
- Must not have been relied on in:
  - An air quality analysis in a previous NSR permit analysis
  - A “Reasonable Further Progress” demonstration for nonattainment pollutant (PM<sub>2.5</sub>)
- Decrease must be enforceable by date construction commences
- Creditable decrease is based on actual emissions to PTE
  - If actual emissions are higher than existing allowable emissions, creditable decrease is based on the existing allowable emissions and the revised allowable emissions
- Increase must involve some amount of actual increase
- Must involve “approximately the same quantitative significance for public health and welfare” as project emission increase





# Netting Example – PM10

$$\text{Net Emission Increase} = \text{Project Emissions} + \text{Sum of Emission Increases and Decreases Over Contemporaneous Period}$$



## Step 1: Calculate Project Emissions

$$\text{Project Emissions} = 20 \text{ tpy}$$

## Step 2: Sum Increases and Decreases over contemporaneous period

$$\text{Sum of Emission Increases and Decreases Over Contemporaneous Period} = -15 \text{ tpy}$$

## Step 3: Calculate Net Emission Increase

$$\text{Net Emission Increase} = 20 \text{ tpy} + (-15 \text{ tpy}) = 5 \text{ tpy}$$

## Step 4: Compare to Significant Threshold

$$5 \text{ tpy} < 15 \text{ tpy}$$

Significant Emission Thresholds	
Pollutant	Federal NSR
PM10	15 tons/year

**Not Applicable to NSR**

# Summary of the Proposed NSR Applicability Test for Major Source Modifications

Does the modification result in an emission increase for PTE-to-PTE test?

Yes

Applicable to NSR

No

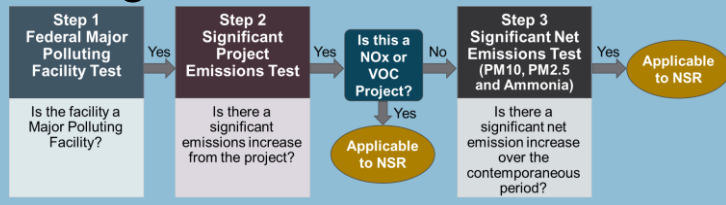
Does the modification result in a significant increase using the Federal Applicability Test using the Three Part Test?

Yes

Applicable to NSR

No

NSR is not Applicable



- First applicability test retains the method of current Regulation XIII
- The Federal Applicability Test is a 3-step test that uses the NSR Reform calculation method and federal thresholds
  - Netting not allowed for NOx and VOC, but is allowed for other NSR pollutants
- Most provisions can be incorporated by reference, with minor revisions as discussed
- A guidance document will be needed to streamline implementation

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