


***Part 231***  
***Applicability Assessment***  
***Lessons Learned...***

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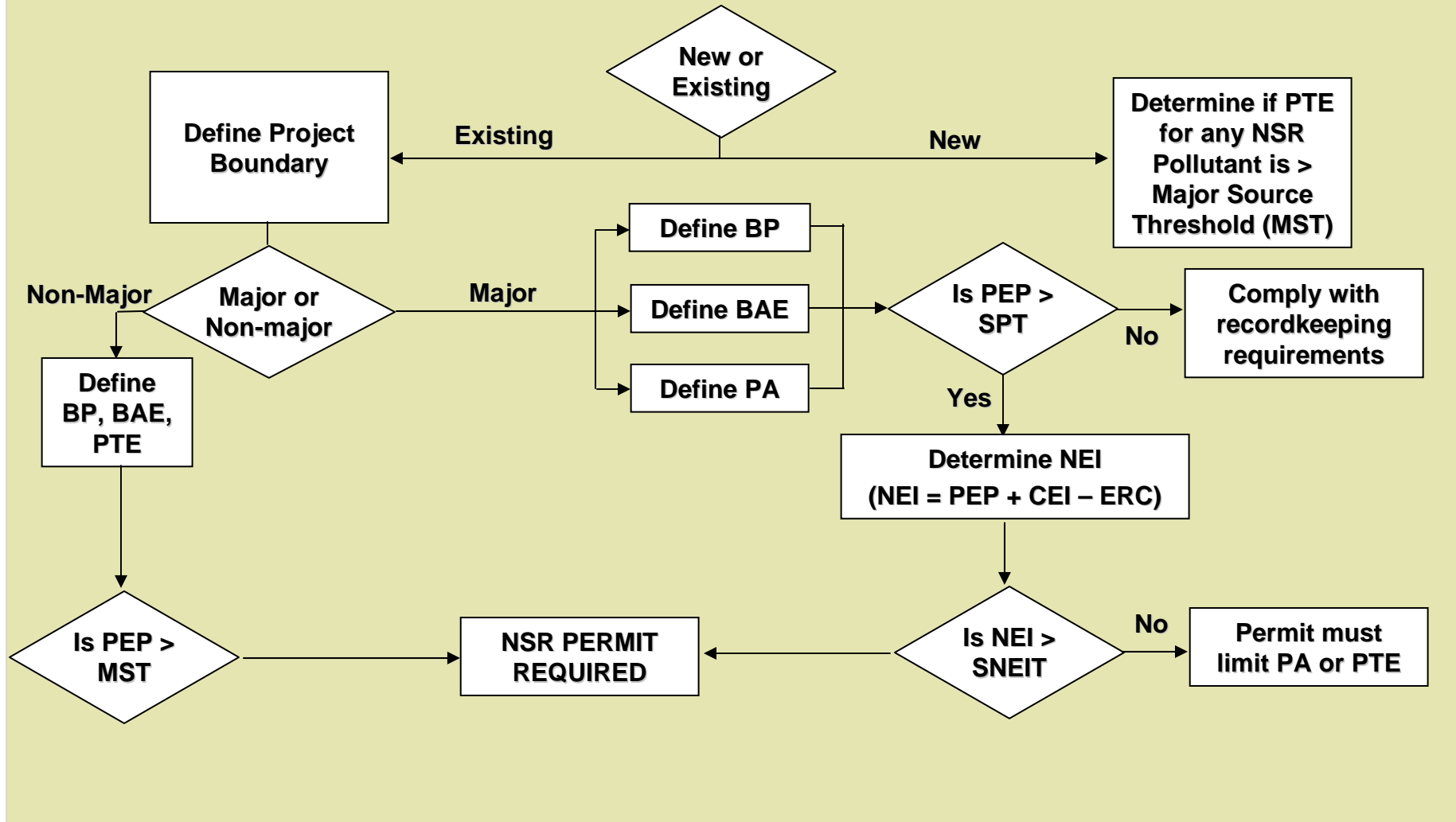
# Session Objectives

- **Introduce Mechanics of Part 231 NSR Applicability Assessment**
- **Review Part 231 Key Applicability Terms**
- **Review Lessons Learned from Applicability Assessment Work**

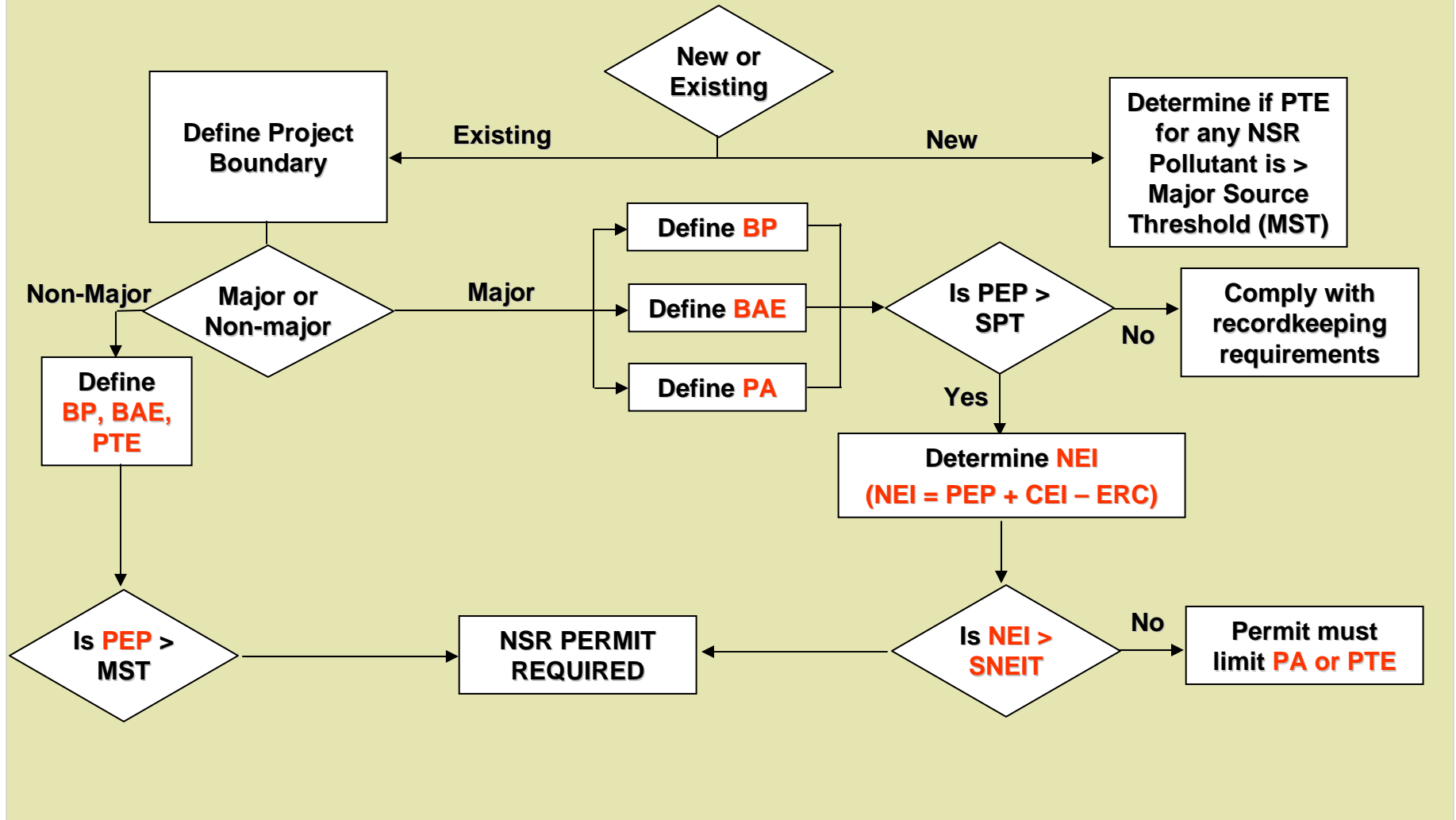
# Important NSR Applicability Terms

- **Attainment and Nonattainment**
- **Major Source**
- **Potential to Emit (PTE)**
- **Baseline Period (BP)**
- **Baseline Actual Emissions (BAE)**
- **Projected Actual Emissions (PA)**
- **Project Emission Potential (PEP)**
- **Significant Project Threshold (SPT)**
- **Net Emissions Increase (NEI)**
- **Significant Net Emissions Increase Threshold (SNEIT)**

# NSR Applicability Overview



# NSR Applicability Overview



# Key Applicability Issues

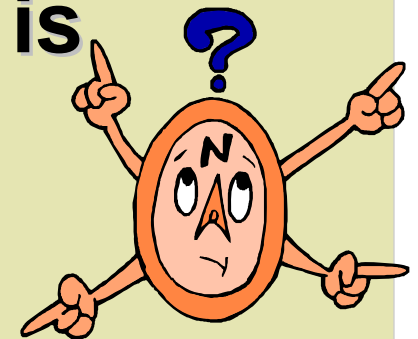
Part	Pollutant-Specific Attainment Status	Type of Activity	Applicability	Calculation Method
231-5	Nonattainment	New Facility	PTE >Major Source Threshold	Classic PTE Definition
		Mod at existing non-major	PEP >Major Source Threshold	For New Source: PEP = PTE For Existing Source: PEP = PTE - BAE (or BA)
231-6	Nonattainment	Mod at existing Major	If PEP >Significant Project Threshold then Determine NEI	For New Source: PEP = PTE For Existing Source: PEP = PA - BAE (or BA)
			If NEI < Significant NEI then permit must limit PA	NEI = PEP + contemporaneous (CEI - ERC )
			If NEI > Significant NEI then NSR permit	
231-7	Attainment-PSD	New Facility	PTE >Major Source Threshold	Classic PTE Definition
		Mod at existing non-major	PEP >Major Source Threshold	For New Source: PEP = PTE For Existing Source: PEP = PTE - BAE (or BA)
231-8	Attainment-PSD	Mod at existing Major	If PEP >Significant Project Threshold then Determine NEI	For New Source: PEP = PTE For Existing Source: PEP = PA - BAE (or BA)
			If NEI < Significant NEI then permit must limit PA	NEI = PEP + contemporaneous (CEI - ERC )
			If NEI > Significant NEI then major NSR/PSD permit	

PTE = Potential to Emit (see Part 200 definitions)  
 PEP = Project Emission Potential  
 PA = Projected Actual Emissions  
 BAE = Baseline Actual Emissions

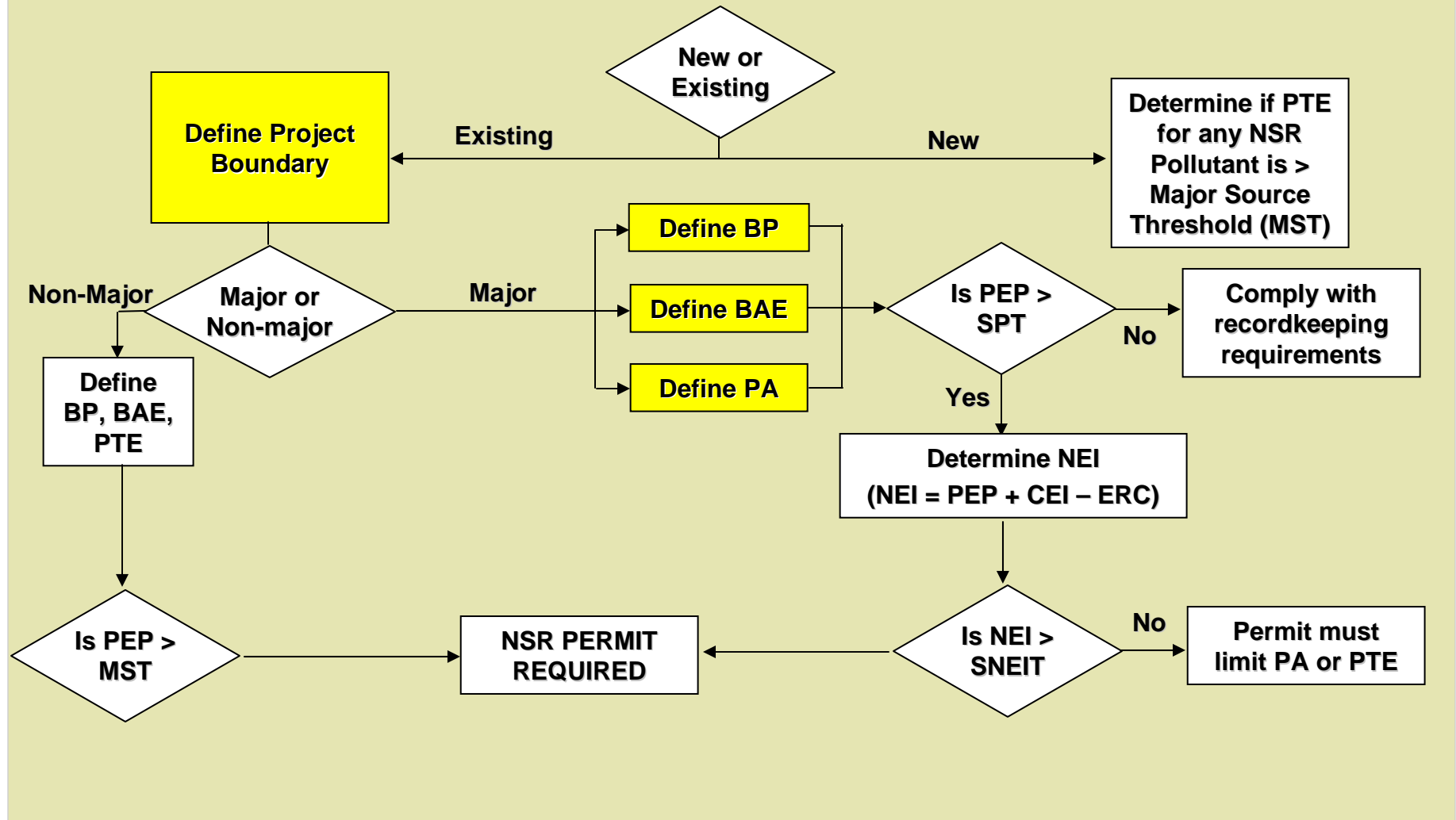
BA = Baseline Allowable Emissions  
 NEI = Net Emissions Increase  
 CEI = Creditable Emissions Increase  
 ERC = Emission Reduction Credit

# Lesson No. 1 – Know Part 231 Terms and Steps

- Each defined term has substance and prescribed determination methodology
- Applicability assessment must be done in a stepwise fashion or it is easy to get lost



## Lessons 2 through 5 a bit more complicated...

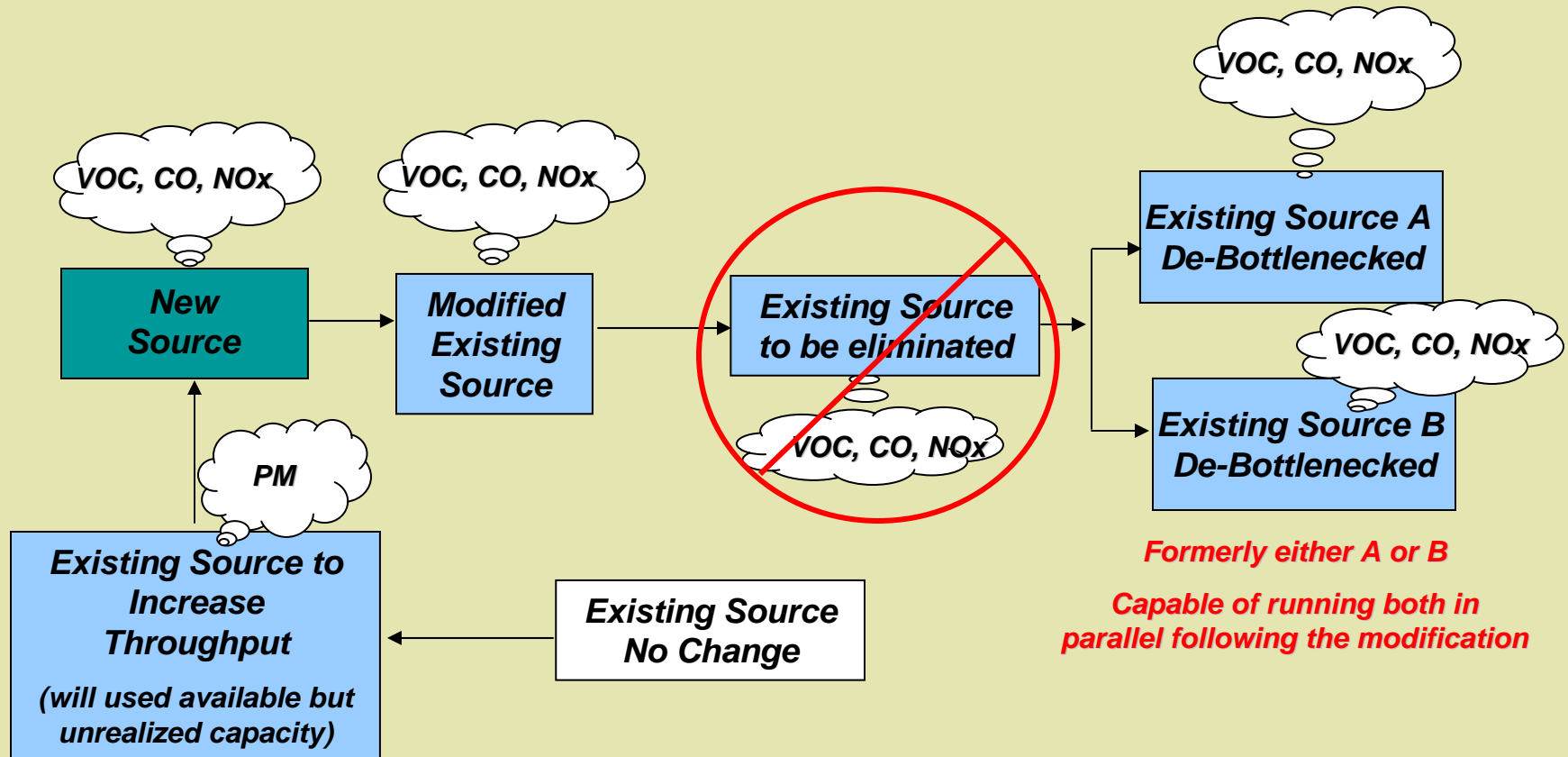


## **Lesson No. 2 – Define the Project Boundary for Existing Facilities**

**Affected emissions sources that are included in the project boundary for the purpose of NSR applicability include those which will be:**

- **new installations;**
- **directly modified existing units;**
- **existing sources that have an increase in emissions resulting from the removal of an upstream or downstream production constraints resulting from the project (de-bottlenecked units) or an increase in utilization; and**
- **sources which will be permanently shut-down (emissions will be included in the netting analysis).**

# Simple Process Flow Diagrams Help Define Boundary



# Lesson 3 – Selection of Baseline Period may be Iterative based on Baseline Actual Emissions for each Regulated NSR Pollutant

## Baseline Period is:

- Any 24 consecutive months within the **5 years** immediately preceding the date of commencement
- If < 24 consecutive months of operation exist, this period of operation must be used as the baseline period

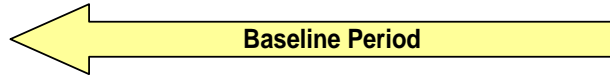
***Date of commencement: for a creditable emission increase, an ERC which is scheduled to occur in the future, or an NSR major modification - period begins immediately preceding the date of NYSDEC's receipt or the respective application***

# Baseline Actual Emissions

The average rate in tons per year physically emitted during the baseline period:

- determined by using actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected baseline period.
- includes fugitive emissions to the extent *quantifiable*, and emissions associated with startups and shutdowns, and malfunctions
- must be adjusted downward to exclude any non-compliant emissions
- for multiple sources, **one baseline period must be used to determine the baseline actual emissions of the emission sources being modified** - A different baseline period **cannot** be used for each regulated NSR contaminant

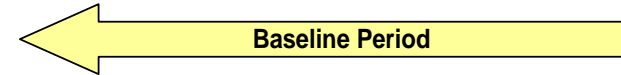
# Baseline Period Determination



NOx Tons per Month					
Month/Year	2005	2006	2007	2008	2009
January	5	3	4	8	2
February	3	4	6	6	3
March	5	8	3	6	5
April	4	2	4	3	5
May	6	4	4	4	11
June	3	6	6	15	6
July	4	3	1	7	13
August	8	4	3	4	2
September	6	2	4	6	4
October	3	3	4	3	6
November	6	6	15	4	4
December	2	2	6	4	3
Total (TPY)	55	47	60	70	64

Application Submittal Date

Maximum 24 Consecutive Months =  $148/2 = 74$  TPY



PM10 Tons per Month					
Month/Year	2005	2006	2007	2008	2009
January	52	45	51	44	43
February	43	36	46	38	37
March	37	51	44	45	45
April	45	46	52	43	36
May	36	44	43	43	36
June	51	38	37	37	51
July	46	45	45	45	46
August	44	43	36	38	37
September	38	37	51	45	45
October	45	45	46	43	36
November	37	37	51	51	44
December	26	38	67	37	51
Total (TPY)	500	505	569	509	507

Application Submittal Date

Maximum 24 Consecutive Months =  $1079/2 = 529.5$  TPY

**11/2007 - 10/2009**

Projected Actual NOx =	105 TPY
Baseline Actual NOx =	74 TPY
NOx PEP =	31 TPY
NOx SPT =	40 TPY

**12/2006 - 11/2008**

Projected Actual NOx =	105 TPY
Baseline Actual NOx =	64 TPY
NOx PEP =	41 TPY
NOx SPT =	40 TPY

**12/2006 - 11/2008**

Projected Actual PM10 =	555 TPY
Baseline Actual PM10 =	529.5 TPY
PM10 PEP :	25.5 TPY
PM10 SPT =	15 TPY

**11/2007 - 10/2009**

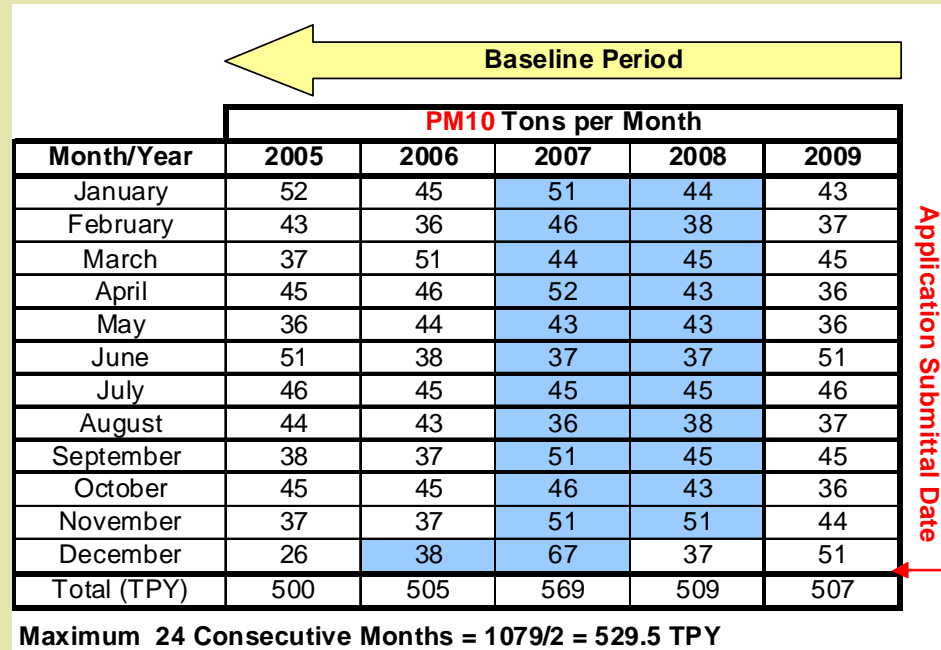
Projected Actual PM10 =	555 TPY
Baseline Actual PM10 =	519 TPY
PM10 PEP :	36 TPY
PM10 SPT =	15 TPY

# Remember that Baseline Period Analysis needs to include all sources in the Project Boundary

Source 4 – Tons per Month					
Source 3 – Tons per Month					
Source 2 – Tons per Month					
Source 1 – Tons per Month					
PM10 Tons per Month					
Month/Year	2005	2006	2007	2008	2009
January	52	45	51	44	43
February	43	36	46	38	37
March	37	51	44	45	45
April	45	46	52	43	36
May	36	44	43	43	36
June	51	38	37	37	51
July	46	45	45	45	46
August	44	43	36	38	37
September	38	37	51	45	45
October	45	45	46	43	36
November	37	37	51	51	44
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Total (TPY)	500	505	569	509	507

# Lesson 4 –

## Baseline Actual Emissions cannot exceed Allowable



PM10 Tons per Month					
Month/Year	2005	2006	2007	2008	2009
January	52	45	51	44	43
February	43	36	46	38	37
March	37	51	44	45	45
April	45	46	52	43	36
May	36	44	43	43	36
June	51	38	37	37	51
July	46	45	45	45	46
August	44	43	36	38	37
September	38	37	51	45	45
October	45	45	46	43	36
November	37	37	51	51	44
December	26	38	67	37	51
Total (TPY)	500	505	569	509	507

Maximum 24 Consecutive Months =  $1079/2 = 529.5$  TPY

***If affected sources are subject to a PM10 emissions cap of 525 TPY***

***Then Actual Emissions of 529.5 TPY Exceeded Allowable of 525 TPY***

***Therefore Baseline Actual for this Baseline Period = 525 TPY***

## **Lesson 5 – Adjustments for Demand Growth can make a Significant Difference**

**Projected Actual Emissions - The maximum annual rate, in tons per year that the emission source is projected to emit:**

- **in any one of the 5 years (12-month period) following the date the source commences operation following a modification, or**
- **in any one of the 10 years following a modification, if the project involves increasing the emission source's design capacity or its potential to emit and full utilization of the source would result in a significant emissions increase or a significant net emissions increase at the major facility.**

# Projected Actual Emissions

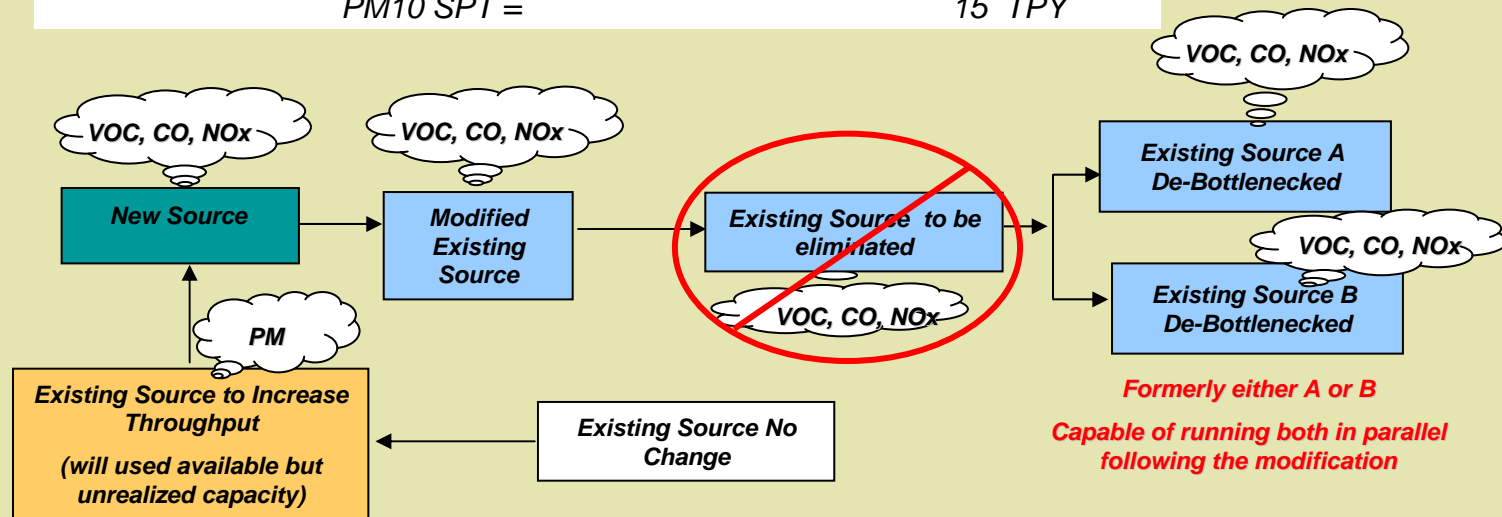
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When determining Projected Actual:

- consider all relevant information;
- **include** fugitive emissions to the extent *quantifiable* and emissions associated with startups and shutdowns; and
- **exclude** any increase in emissions that the existing source could have accommodated during the *baseline period* that are unrelated to the particular project, **including any increased utilization due to product demand growth.**

# Projected Actual Demand Growth Adjustment

Projected Actual PM10 =	555 TPY
Baseline Actual PM10 =	529.5 TPY
PM10 PEP =	<b>25.5 TPY</b>
PM10 SPT =	15 TPY
Projected Actual PM10 = 555 TPY	
<b>Projected PM10 Emissions which the source could have accomodated independent of the project = 12 TPY</b>	
Baseline Actual PM10 =	529.5 TPY
PM10 PEP =	13.5 TPY
PM10 SPT =	15 TPY



# Lessons Learned

1. Know Part 231 Terms and Use a Step-wise
2. Define the Project Boundary for Existing
3. Selection of Baseline Period may be Iterative on Baseline Actual Emissions for each Key NSR Pollutant
4. Baseline Actual Emissions cannot exceed Allowable
5. Adjustments for Demand Growth can make a significant difference



# For More Information Contact:

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