



# New Source Review Program Revisions

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# Presentation Topics

- 📖 List of Acronyms
- 📖 Why “*Reform*” Existing NSR Program?
- 📖 NSR Reform Amendments Part I – 12/31/2002
  - ✍ Calculating Emissions Increases
  - ✍ Clean Unit Provisions
  - ✍ Pollution Control and Prevention Projects
  - ✍ Plantwide Applicability Limits



# Presentation Topics

- ✚ NSR Reform Amendments Part I –  
Implementation Timeline
- ✚ NSR Reform Amendments Part II – 10/23/2003
  - ✚ Equipment Replacement Provisions – *Replaces Routine Maintenance Repair and Replacement Exemption from NSR*
- ✚ NSR Reform Amendments Part II –  
Implementation Timeline



# List of Acronyms

- ✚ NSR – New Source Review
- ✚ PSD – Prevention of Significant Deterioration
- ✚ EUSGUs – Electric Utility Steam Generating Units
- ✚ PAL – Plantwide Applicability Limit
- ✚ PCP – Pollution Control Projects
- ✚ ODS – Ozone Depleting Substances
- ✚ ODP – Ozone Depleting Potential
- ✚ RMRR – Routine Maintenance, Repair, Replacement
- ✚ ERP – Equipment Replacement Provisions



# Why “*Reform*” Existing NSR Program?

- ✚ Complex applicability process
- ✚ Overly broad applicability test
- ✚ Problems with actual-to-potential approach
- ✚ Administrative burden
- ✚ Debottlenecking questions
- ✚ Boundaries of emission units versus processes
- ✚ BACT
- ✚ Class I areas and FLM oversight
- ✚ (numerous others....)



# NSR Reform Amendments I – December 2002

- ✚ EPA released final and proposed rulemaking on December 31, 2002 in the Federal Register
- ✚ Builds on a nearly decade long effort to reform NSR/PSD
- ✚ Reforms intended to clarify(?), simplify(?), encourage environmentally beneficial projects, and promote energy efficiency improvements



# NSR Reform Amendments I – December 2002 (cont'd)

- ✦ Impact of NSR Reform Amendments
  - ✦ Single largest change to PSD rules since August 1980
  - ✦ Changes largely impact “existing sources”
  - ✦ Program and procedures for greenfield manufacturing sites largely unchanged



# NSR Reform Amendments I – December 2002 (cont'd)

- ✦ Major elements of NSR Reform Amendments I
  - ✦ Calculating Actual Emissions Baseline and Actual Emissions Increases
  - ✦ Clean Unit Provisions
  - ✦ Pollution Control and Prevention Projects
  - ✦ Plantwide Applicability Limits



# Calculating Actual Emissions Baseline

- ✦ Changes how baseline emissions are calculated
  - ✦ Old method: Average of 24 consecutive months immediately prior to the date of the proposed change unless an alternative (more representative) timeframe is approved by the permitting authority
  - ✦ New Method: Highest *consecutive 24 month* period within the immediately preceding 10 years (*Non-EUSGUs*)



# Calculating Emissions Increases

✦ Changes how emissions increases are calculated

✦ Old method:

- ✦ Emissions increases for both physically and operationally changed emission units and associated emission units must be quantified on a “current actuals to future potentials” basis
- ✦ Future potential emissions are based on the maximum capacity of the unit rather than the worst-case impact of a proposed project on emissions from the unit



# Calculating Emissions Increases (cont'd)

✦ Changes how emissions increases are calculated (cont'd)

✦ New method – existing emission units:

- ✦ Post-change actual emissions minus baseline emissions
- ✦ Exclude portion of the post-change emissions that both:
  - 1) Could have been accommodated during the baseline period (before the change) and,
  - 2) Is unrelated to the particular project, including emissions attributed to an increase in projected capacity utilization due to product demand growth



# Calculating Emissions Increases (cont'd)

✚ Changes how emissions increases are calculated (cont'd)

✚ New method – new emission units:

- ✚ Actual emissions baseline is zero
- ✚ Projected future actual is the unit's potential-to-emit (can be limited by permit conditions)

✚ New method – clean emission units:

- ✚ No emissions increase occurs if the project does not result in the unit losing its clean unit status



# Calculating Emissions Increases (cont'd)

- ✦ **Alternative** - Owner may still choose to set the projected (future) actual emissions equal to the potential to emit after the change
  - ✦ In this case, no annual tracking of post change actual emissions is required



# Clean Unit Exclusion

- ✎ “Clean Unit” has emissions level/reduction less than or equal to BACT/LAER
- ✎ 10 year exemption from NSR except for projects that
  - ✎ Require a change in hourly maximum emissions
  - ✎ Change the “physical or operational characteristics” of the unit on which BACT/LAER is based



# Clean Unit Exclusion (cont'd)

- ✦ Emission units can qualify (and re-qualify) as “clean units” in two primary ways
  - ✦ Units that have installed BACT (or LAER) pursuant to a major NSR permit issued through the applicable NSR program (in the last 10 years)
  - ✦ Units that achieve emission limitations “comparable” to BACT (or LAER)



# Clean Unit Exclusion (cont'd)

- ✦ “Comparability” can be shown as follows:
  - ✍ Emissions limitation must be as good as that achieved by other sources for which a BACT/LAER determination has been made in the last 5 years, OR
  - ✍ Owner or operator may demonstrate that a unit’s control technology is “substantially-as-effective” as BACT during the public participation process (i.e., case-by-case approval from agency)
- ✦ Emissions must be reduced to below “uncontrolled” allowable levels



# Pollution Control Projects

- ✦ New rule formalizes and broadens EPA's 1994 "policy" on pollution control projects
- ✦ Excludes environmentally beneficial projects (PCPs) from consideration as a "physical or operational change" within the definition of major modification
- ✦ Projects that have a pollution control effect qualify; pollution control does not have to be the sole purpose



# Pollution Control Projects (cont'd)

- ✦ Six (6) categories of environmentally beneficial project types qualify as “presumptive” PCPs
- ✦ PCPs also include pollution prevention projects such as:
  - ✍ process changes,
  - ✍ product reformulation,
  - ✍ redesign,
  - ✍ substitution of less polluting raw materials, that eliminate or reduce air pollutants and other pollutants to the environment prior to recycling, treatment, or disposal



# Pollution Control Projects (cont'd)

- ✦ Only notification is required for presumptive PCPs
- ✦ Permit application required for all other projects seeking PCP treatment
  - ✍ Address environmental benefit derived from the emissions reductions (and to the degree these reductions outweigh any detriment associated with increases in other pollutants).
  - ✍ No violation of the NAAQS, PSD increments, or Class I area AQRVs.
  - ✍ State (SIP) or Title V permit must be amended for all non-presumptive PCPs. Public notice is required.



# Pollution Control Projects (cont'd)

## Presumptive PCPs

1. Conventional or advanced flue gas desulfurization or sorbent injection for SO<sub>2</sub> control
2. Electrostatic precipitator, baghouses, high-efficiency multiclones, or scrubbers for PM control
3. Flue gas recirculation (FGR), low-NO<sub>x</sub> burners, selective non-catalytic and catalytic reduction (SNCR or SCR), low emission combustion (for IC engines), or oxidation/absorption catalyst for NO<sub>x</sub> control



# Pollution Control Projects (cont'd)

## Presumptive PCPs (cont'd)

4. Regenerative thermal or catalytic oxidizers (RTO/RCO), condensers, thermal incinerators, hydrocarbon combustion flares, adsorbers/ absorbers, biofilters, floating roofs for VOC/HAP control
5. Fuel switches
6. Activities or projects involving the switch of an ozone depleting substance (ODS) to one with less ozone depleting potential (ODP)



# Plantwide Applicability Limitations

- ✚ Establish PAL for specific pollutant based on actual emissions baseline (24-month baseline) plus the PSD significant emission rate
  - ✚ *All* facility emissions of a pollutant included
  - ✚ Annual emission limit, rolling 12-month
- ✚ Can make any changes without obtaining a major NSR permit, provided emissions do not exceed plantwide cap
- ✚ PALs last for 10 years
  - ✚ Upon renewal, emissions level may(?) be re-evaluated



# Plantwide Applicability Limitations (cont'd)



Expect extensive monitoring requirements

- ✍ Mass balance calculations for activities using coatings or solvents
- ✍ Continuous Emissions Monitoring Systems (CEMS)
- ✍ Continuous Parameter Monitoring Systems (PEMS)
- ✍ Emission factors



# Plantwide Applicability Limitations (cont'd)

- ✦ Expect major marketing of PALs from EPA
  - ✦ Rewards innovation in pollution control by offering opportunity to expand production if emissions can be held in check
  - ✦ Further innovations in pollution control is what EPA desires
  
- ✦ A facility can utilize a PAL to avoid NSR requirements for individual projects, but other pre-construction permitting requirements may require the installation of additional controls



# NSR Reform Amendments I – Implementation Timeline

- ✦ Published signed final rule in Federal Register on December 31, 2002 (and amended slightly on November 7, 2003) for first set of revisions
  - ✦ Rule was effective 60 days later - March 3, 2003
- ✦ Various entities filed lawsuits to overturn the rule revisions. Combined into one suit being decided by the U.S. Court of Appeals for the District of Columbia Circuit (DC Court)
- ✦ Written briefs submitted last year. Oral arguments heard on January 25, 2005
- ✦ DC Court expected to decide case within a few months



# NSR Reform Amendments I – Implementation Timeline (cont'd)

- ✚ Various entities also petitioned DC Court to stay the first set of NSR rule revisions
- ✚ DC Court did not stay the rules
- ✚ Changes already implemented in states that have “delegated” NSR rules or adopt 40 CFR 52.21 (PSD) by reference without specifying a date
- ✚ Changes must await rulemaking in states with SIP-approved programs
  - ✚ EPA gives states 3 years to revise SIPs



# NSR Reform Amendments II – October 2003

- ✚ Published signed final rule in Federal Register on October 23, 2003, for second set of revisions
  - ✚ Equipment Replacement Provision (EPR) – replaces routine maintenance, repair, and replacement (RMRR) exemption from NSR
  - ✚ *Not addressed - Debottlenecking*
  - ✚ *Not addressed - Project aggregation*



# NSR Reform Amendments II – Implementation Timeline

- ✚ Various entities sued to overturn the equipment replacement provision rule. DC Court will decide the case. Decision not expected soon.
- ✚ Various entities also petitioned DC Court to stay the second set of NSR rule revisions
- ✚ DC Court has stayed the equipment replacement provision rule
- ✚ Continue to follow RMRR exemption rules until DC Court ruling

