
New Source Review Staff Presentation Community Advisory Council

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Staff Introductions

Michael Goldman – Engineering Manager

Timothy Mitro – Air Quality Engineer, Rules

David Harris – Engineering Supervisor

Our Mission

Our mission is to protect the people and the environment of Santa Barbara County from the effects of air pollution.

Overview

- Basics of New Source Review
- Current New Source Review Rules
- Proposed Rule Revisions
- Air Resources Board and EPA Oversight
- Next Steps
- Questions

Basics of New Source Review

- What is New Source Review (NSR)?
- Who does NSR apply to?
- When does NSR not apply?
- What is an Authority to Construct?
- Best Available Control Technology (BACT)
- Offsets and Emission Reduction Credits (ERCs)
- Air Quality Impact Analyses (AQIA)
- Public Noticing and Hearings

What is New Source Review - NSR?

- NSR is a pre-construction permitting program
- It is an important tool to help the County attain and maintain compliance with State and National Ambient Air Quality Standards
- NSR is composed of two parts:
 - Nonattainment Review (NAR)
 - Prevention of Significant Deterioration (PSD)
- There are both State and Federal NSR program requirements
- SBCAPCD implements these NSR programs in a unified permit process
- District staff evaluate permit applications to determine if applicable requirements apply
 - Best Available Control Technology (BACT)
 - Offsets and Emission Reduction Credits (ERCs)
 - Air Quality Impact Analyses (AQIA)
- Each of the above have specific thresholds that trigger their requirement

Who does NSR apply to?

- New Source Review applies to “stationary sources” that emit air pollution
- This includes new sources or modifications to existing sources
- Examples of projects subject to NSR include:
 - Gas stations
 - Dry cleaners
 - Offshore oil and gas platforms
 - Onshore oil and gas production
 - Medical device manufacturers
 - Cement batch plants
 - Boilers
 - Wastewater treatment plants
 - Wineries

When does NSR not apply?

- New Source Review only applies to “stationary sources”
- The following are not subject to NSR:
 - Motor vehicles
 - Trains and planes
 - Consumer products
- Most agricultural operations. Large operations are subject to permit and NSR
- Greenhouse Gas (GHG) emissions are not subject to NSR.
 - Exception is for existing major sources that propose projects with > 75,000 tpy increases of GHGs

What is an Authority to Construct?

- An Authority to Construct is a permit that provides the District's approval of a project
- An ATC permit must be obtained prior to construction
- District staff review the application for compliance with all local, state and federal rules
- We also ensure that the proposed project is consistent with any lead agency approvals
- When lead, the District applies CEQA through our Environmental Review Guidelines (4/30/15)
- All ATC permits are enforceable documents by our Compliance Division
- ATC permits contain emission and operational limits, as well as monitoring, recordkeeping, and reporting requirements
- Once compliance is confirmed, the District issues a Permit to Operate for the facility

Best Available Control Technology - BACT

- BACT = Best Available Control Technology
- BACT is triggered if the project's emissions exceed 25 pounds per day
 - Potential-to-Emit (PTE) based calculation
- Is a control device or technique that meets current state-of-the-art standards
- There are normally two components to a BACT determination:
 - Technology
 - Emissions standard
- Example: Oilfield Steam Generator
 - Technology: Low-NO_x burner design
 - Standard: 7 ppmvd NO_x @ 3% O₂
- Example: Electronic Device Manufacturer
 - Technology: Regenerative Thermal Oxidizer
 - Standard: 98% destruction efficiency

Offsets and Emission Reduction Credits

- Offsets are mitigation required for new projects that exceed NSR thresholds
- This mitigation is in the form of Emission Reductions Credits (ERCs)
- A “net air quality benefit” is required and this is achieved by providing ERCs at a ratio set by the rule
- ERCs are created by companies that voluntarily reduce their emissions or shut down their facility
- ERCs must be: Surplus, Quantifiable, Enforceable, Permanent, and Real
- Examples of how ERCs are created:
 - Electrification of water wells powered by diesel engines
 - Installation of SCR on a turbine compressor
 - Shut down of a facility
- Rule 806 (*Source Register*) sets the standards for creating and tracking ERC Certificates
- APCD webpage contains: list of all active ERC Certificates, list of all transactions, and costs per sale

Air Quality Impact Analyses - AQIA

- AQIA = Air Quality Impact Analyses
- An AQIA consists of the following:
 - Air dispersion modeling to ascertain compliance with State and National Ambient Air Quality Standards
 - Air quality increment analysis
 - Class I and Class I Area impact analysis
 - Visibility, soils, and vegetation analysis
- AQIAs are required for larger projects

Public Noticing and Hearings

- The NSR process has requirements for public noticing and public hearings
- Required by projects that trigger PSD, AQIA, and/or offset requirements
- Makes available all analyses to the public, Air Resources Board, and adjoining Districts
- Notification via Newspaper
- A 30-day public notice period
- Public Hearings are held if sufficient interest is generated or if any aggrieved party requests so in the 30-day public comment period
- Control Officer makes final decision on the project based on all public comments

Current New Source Review Rules

- Regulation VIII (*New Source Review*) was adopted in April 1997 as Rules 801-806
- Rule 810 (*Federal Prevention of Significant Deterioration – PSD*)
- All these rules were submitted to EPA for inclusion in the State Implementation Plan (SIP)
- Rules 801-806 are ARB-approved
- EPA approved Rule 810 on November 12, 2015

Proposed Rule Revisions

Rule No.	Current Rule Name	Proposed Rule Name	Proposed Actions
102	Definitions	Definitions	Amendments
105	Applicability	Applicability	Amendments
202	Exemptions to Rule 201	Exemptions to Rule 201	Amendments
204	Applications	Applications	Amendments
801	New Source Review	New Source Review – Definitions and General Requirements	Amendments
802	Nonattainment Review	New Source Review	Amendments
803	Prevention of Significant Deterioration	n/a	Repeal
804	Emission Offsets	Offsets	Amendments
805	Air Quality Impact Analysis and Modeling	Air Quality Impact Analysis, Modeling, Monitoring, and Air Quality Increment Consumption	Amendments
806	Emission Reduction Credits	Emission Reduction Credits	Amendments
809	n/a	Federal Minor Source New Source Review	New
1301	Part 70 Operating Permits – General Information	Part 70 Operating Permits – General Information	Amendments

No. 1 – Text Revisions/Clarifications

- Rule text was re-written to improve clarity, readability, and intent
- Redundant requirements were removed
- Grammatical errors were corrected
- New definitions were added as needed (e.g., PM_{2.5})
- Existing definitions were updated, moved, or deleted to reflect proposed changes
- Every change is shown in strikeout/underline in each proposed amended rule
- Tables 2-1 through 2-11 in the Staff Report details and maps out each change

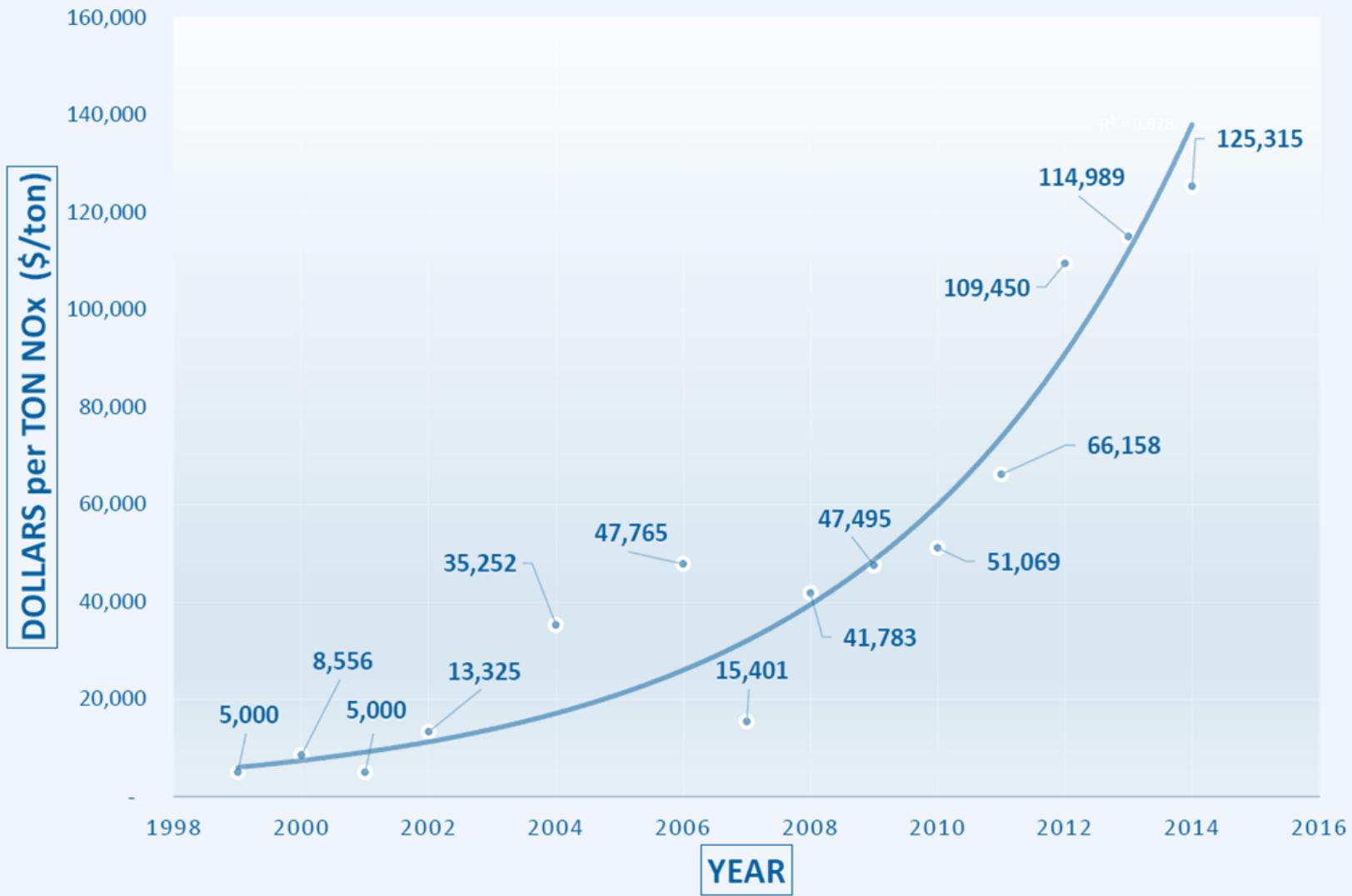
No. 2 – Calculation Methodology

- We currently use two calculation methodologies in the permit process
 - Potential to Emit (PTE)
 - Net Emissions Increase (NEI)
- Our proposal is to eliminate the NEI calculation and use the PTE method only
- The PTE methodology is easy and straight forward; it's used for our BACT threshold
- The NEI methodology can get convoluted and be difficult to track
- It's common for both permittees and District staff to calculate the NEI wrong
- The Health & Safety Code air quality mandates are based on the PTE methodology
- No other California air district uses the NEI methodology (except for Federal PSD)
- Using the PTE methodology results in less complexity and more certainty

No. 3 – Offset Program Revisions

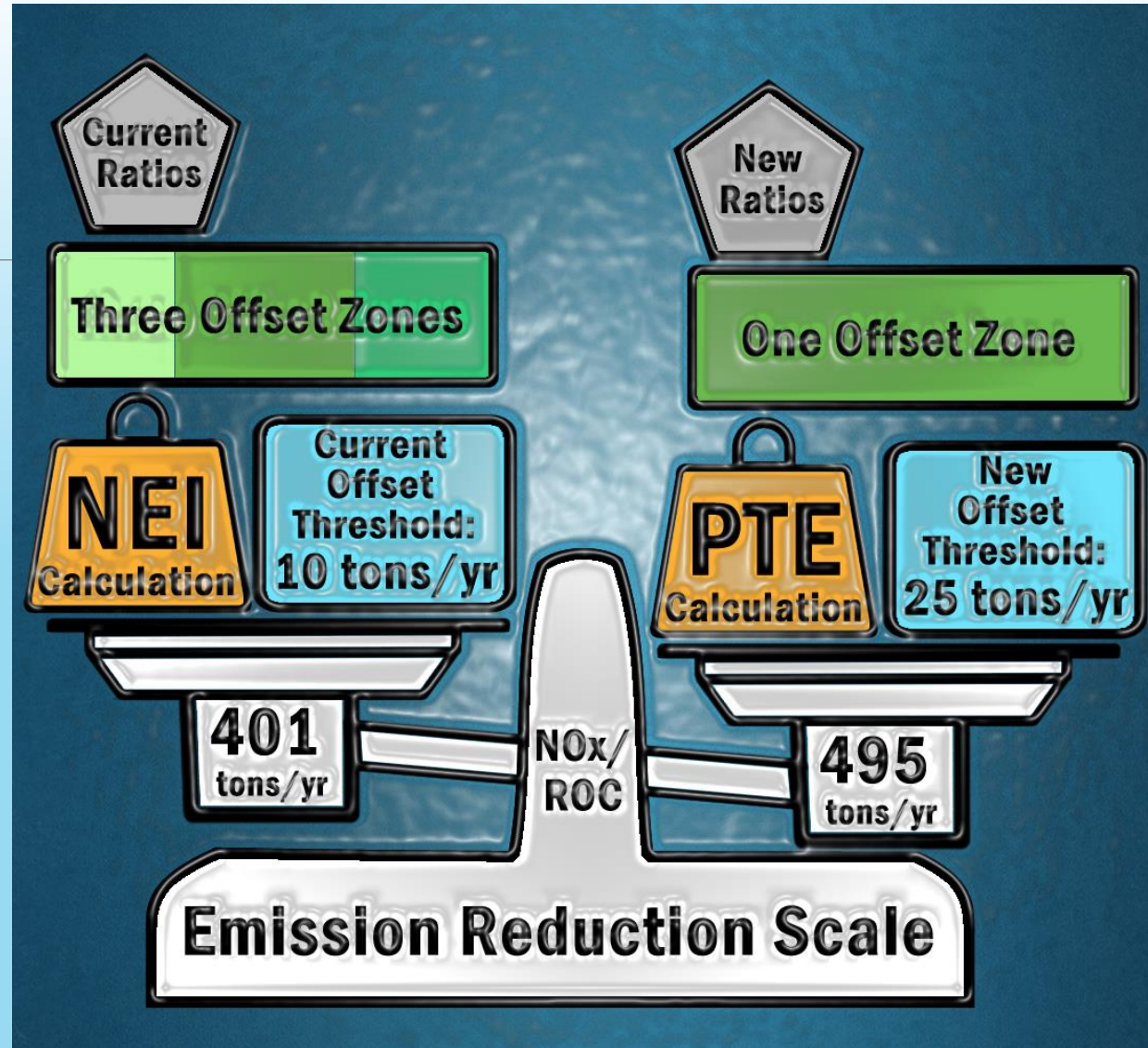
- State Health & Safety Code Section 40918 – Moderate Classification for ozone
- Mandated to offset emission increases at sources with a PTE over 25 tpy
- Currently implement an “equivalent” NEI-based program using different thresholds of 10 tpy and 55 lb/day, offset zones and trading ratios
- ARB-required program tracking shows that we meet the State mandate
- Program difficulties include:
 - ERC costs at \$125,000 per ton
 - Availability of ERCs is low
 - Zones are segmenting program viability
 - Medium-sized companies are being constrained by current alternative approach

FIGURE 1 - NOx 1999 - 2014: AVG \$/TON



No. 3 – Continued

- District is proposing revamping offsets program to better align with the State mandate
- The proposal includes:
 - Changing from an NEI-based to a PTE-based calculation methodology
 - Revising the offset threshold to 25 tpy
 - Changing to a single zone
 - Revising the offset trading ratios
 - Allowing for offset trades with Ventura and San Luis Obispo Counties
- Analyses performed to ascertain if the proposed changes are as stringent as the current rules “*on a programmatic basis*” – Answer is yes
- Evaluated past 17 years of data and applied requirements of both rule sets
- ARB has reviewed our analyses and concurs with our approach and conclusions
- The Question: How is 25 tpy more stringent than 10 tpy?



No. 4 – Offset Exemption: Replacements

- New proposal to exempt functionally equivalent equipment replacements
- Certain criteria must be met
 - The equipment is functionally equivalent
 - BACT is applied to the replacement
 - There is no increase in the potential to emit
 - There is no de-bottlenecking of the process
- Encourages equipment modernizations with newest emission controls
- Discourages the practice of repairing older, higher-emitting equipment simply to avoid offsets
- Will result in lower actual in-the-air emissions
- ARB has asked us to track the implementation of this exemption

No. 5 – Offset Exemption: ES Engines

- ES Engine = Emergency standby engine
- Used for electrical generation, flood water pumping, or firewater pumping
- Permits already limit annual hours of operation from 20 to 50 hours
- District had not expected these engines to trigger offsets when the Rule 202 exemption was modified in 2005
- Not subject to SB 288 analysis since this equipment was exempt in 2002

No. 6 – Merge Rule 803 Requirements

- Rule 803, Prevention of Significant Deterioration, is a local rule only
- It was originally our federally delegated PSD rule
- Rule 810, Federal PSD, now addresses EPA's PSD requirements
- The requirements of Rule 803 must be maintained due to SB 288
- To minimize redundancy and confusion, Rule 803 requirements have been merged into Rules 802, 804, and 805.
- Table 2-7 in the Staff Report details and maps out the changes
- Rule 803 will be repealed

No. 7 – Add PM_{2.5} to Permit System

- PM_{2.5} is a new criteria pollutant with both State and Federal AAQS
- We are currently in attainment for both State and Federal standards
- Regulating PM_{2.5} from new/modified sources helps us maintain compliance with the established 24-hour and annual AAQS and increments
- This is consistent with our Board's practice of regulating attainment pollutants and aligns with new proposed Rule 809 (*Federal Minor Source NSR*)
- BACT and AQIA requirements would be applicable at the set thresholds
- Offsets for PM_{2.5} are not proposed
- See our webpage for detailed technical information on PM_{2.5}

No. 8 – Update AAQS/Increment Table

- The changes are technical
- Table 1 in Rule 805 was revised to reflect changes since 1997
 - Sulfur Dioxide: New 1-hour standard and revised 24-hour standard
 - Nitrogen Dioxide: Revised annual standard and revised 1 hour standard (new federal 1-hour)
 - Carbon Monoxide: Revised 1-hour standard
 - PM₁₀: Revised annual standard and consolidated 24-hour standard/increment into a single line
 - PM_{2.5}: New annual and 24-hour standards and increments
- AQIA process simplification:
 - Baseline dates eliminated; existing background monitored data used instead
 - Alternative mitigation (increment range) text was revised to the 10-year option only
- New Major Sources and Major Modifications must still comply with Federal PSD under Rule 810




No. 9 – Federal Minor Source NSR Rule

- EPA requirement under the Clean Air Act
- Our existing permitting rules did not meet all of EPA's requirements
- District chose to create a new rule to specifically address this EPA mandate
- This rule, and those referenced by it, will be submitted for SIP approval
- Rules 801-806 will not be submitted for SIP approval
- We designed this rule such that compliance with proposed amended Rules 801-806 will ensure that the requirements of this rule are met
- Rule 809 requires:
 - Permits for pre-construction and operation
 - A finding of compliance with AAQS
 - Recordkeeping
 - A finding that the project complies with all applicable requirements
 - Public notification and a public hearing process

Air Resources Board and EPA Oversight

- Draft proposed amended rules and staff report have been reviewed by ARB and EPA – their input is reflected in these draft documents
- EPA’s main input was the need for a Federal Minor Source NSR rule
- ARB’s focus was on compliance with SB 288
- SB 288 mandates no relaxation to a District’s NSR rule set, as it existed on December 30, 2002
- Key area of review was our offsets program
- Review basis: Is there a relaxation to the offsets program “on a programmatic basis?”

ARB/EPA Oversight: Continued

- District analyzed the existing set of rules to the proposed amended rules using the same data set (past 17 years of permitting actions)
- The total mitigation achieved under each program was determined
 - Ozone precursors ($\text{NO}_x + \text{ROC}$) - Mitigation
 - Current Rules: 401 tons vs. Amended Rules: 495 tons 
 - SO_x – Mitigation
 - Current Rules: 341 tons vs. Amended Rules: 352 tons 
 - PM_{10} – Mitigation
 - Current Rules: 61 tons vs. Amended Rules: 75 tons 
- Our conclusion: Proposed rule amendments comply with SB 288

Changes Since Public Workshops

- Revised Rule 105 to address EPA SIP date reference concerns (“hanging references”)
- Revised Rule 102 and Rule 202 to address EPA comment on agricultural operation exemption
- Revised Rule 202 to remove use of the term NEI
- Revised Rule 801 definition of project to address ARB SB 288 concerns for rule relaxation of BACT requirements for certain types of projects
- Revised Rule 802 to address ARB requirement to track replacement offset exemption
- Revised Staff Report – Addressed public comments and rule revisions, including FAQs
- Chapter 7 summarizes the changes since the Workshops

Next Steps

- Community Advisory Council (CAC) meetings
- Last round of ARB and EPA review
- Prepare and release draft EIR
- Board of Directors hearing for consideration

Questions?

