



Best Available Control Technology Scientific Review Committee Meeting

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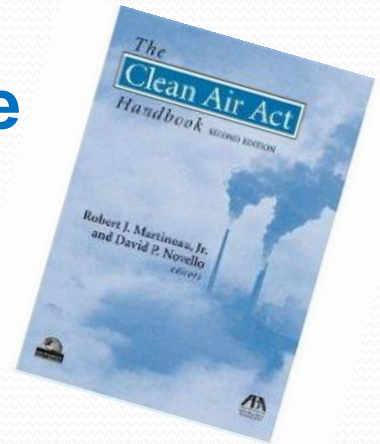
DISCUSSION TOPICS

- **Welcome & Introductions**
- **Brief BACT History and Background**
- **Role of SRC**
- **Proposed updates for BACT Guidelines**



Why is BACT Required?

- Federal Clean Air Act requires all non-attainment areas to have a New Source Review program for Major Sources.
 - ✓ Offsets
 - ✓ Modeling
 - ✓ Lowest Achievable Emission Rate (LAER)
- Implemented through Regulation XIII, XVII, XX and BACT Guidelines for major and minor sources
- California Health & Safety Code 40440.11



HISTORY

- **1979** BACT requirements included in Regulation XIII and requires SCAQMD to publish BACT Guidelines for commonly permitted equipment
- **1983** BACT Guidelines first published. Major revisions in 1988, 1995, and 1998
- **1998** SCAQMD Governing Board approves new BACT process and format, SRC
- **2000** Minor Source BACT adopted
- **2008** Last amendment of BACT Guidelines

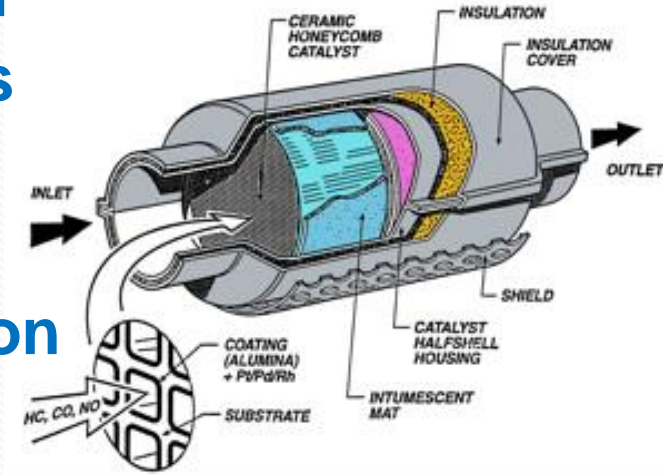
BACT Guidelines Format

- Overview
- Part A - Policy and Procedures for Major Polluting Facilities
- Part B - LAER/BACT Determinations for Major Polluting Facilities
 - Section I – AQMD LAER/BACT Determinations
 - Section II – Other LAER/BACT Determinations
 - Section III – Other Technologies
- Part C – Policy and Procedures for Non-Major Polluting Facilities
- Part D - BACT Guidelines for Non-Major Polluting Facilities



WHAT IS BACT?

- BACT is the most stringent emission limitation or control technique that is
 - achieved in practice, or
 - contained in a State Implementation Plan (SIP), or
 - technologically feasible and cost effective
- Technologically feasible and cost effective criterion for non-major sources is unique to SCAQMD which allows for more stringent controls than LAER



WHEN IS BACT REQUIRED?

- **Minor Sources**

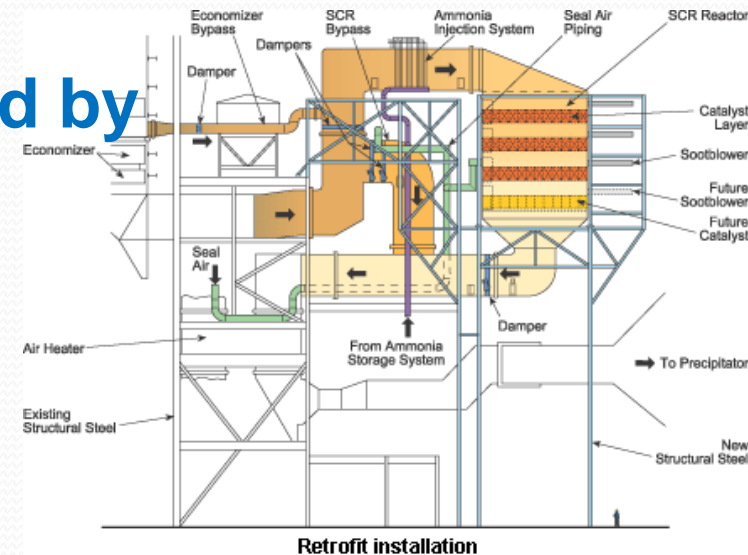
- **SCAQMD Policy:** BACT is required for criteria pollutant emission increases ≥ 1.0 lb/day (more stringent for toxic emissions) Rule 1303(a)

- **Major Sources**

- **NO_x & SO_x at RECLAIM facility:** Based on increase of maximum hourly potential to emit (Rule 2005)
- **Other criteria pollutants** if new daily potential to emit is greater than previous daily potential to emit (Rule 1306 (d)(2))

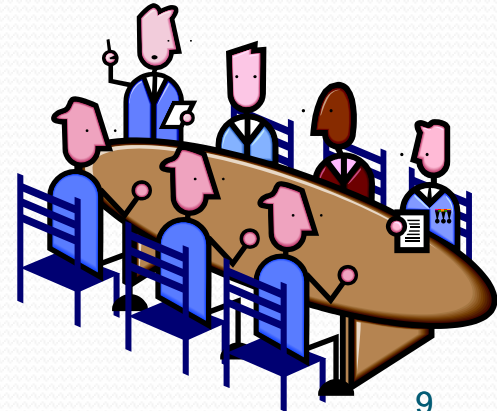
ACHIEVED IN PRACTICE (AIP) BACT

- For major source demonstrated by
 - Commercial availability
 - Reliability
 - 6 months operation
 - Effectiveness
- For minor source demonstrated by
 - H&SC 40440.11
 - 12 months operation
 - Cost Effectiveness
 - Board approval



BACT Scientific Review Committee

- Established in 1995 to increase public participation
- Made up of members from industry, government agencies, trade organizations, academia and consultants.
- Review and comment on the appropriateness of proposed new and more stringent BACT determinations
- Not to comment on past permitting decisions or change them.
- Meets periodically
- Reviews revisions to BACT Guidelines



BACT Guidelines Proposed Updates

- **Overview, Parts A, B, C, D and new Parts E & F (GHG BACT) to maintain consistency with recent changes to SCAQMD rules, State and Federal requirements**
- **Intent is for updates that will not result in more stringent requirements than would otherwise occur.**
- **Available online at BACT web page**

Overview updates

- **Hyperlinks on Table of Contents**
- **Chapter 1**
 - T-BACT reference
 - BACT Docket info updated
 - Hyperlinks added for web pages and e-mail
- **Chapter 2**
 - Updated map of SCAQMD, Fig. 1
- **Chapter 3**
 - CO attainment and BACT requirement
 - PSD Requirements
 - Reference to Rules 1420.1 and 1420.2
 - Chlorobromomethane added to ODCs, Table 2



Overview updates (cont'd)

- **Chapter 4**
 - PSD Rules section
 - BACT Docket info updated
 - Hyperlinks added for web pages and e-mail
- **Chapter 5**
 - Background and role of SRC
 - Link to list of current SRC members*



Major Sources – Parts A & B updates

Part A – Policy & Procedures

- Hyperlinks on Table of Contents
- Chapter 1
 - Fed PM 2.5 NSR and Rule 1325
 - Super “Compliant” Materials
- Other Considerations
 - Capture Efficiency
 - Pollution Prevention
 - Monitoring and Testing
- Clean Fuel Requirements - Electrification



Part B – LAER/BACT Determinations

- Continue working with Engineering and Compliance to update listings
- Flare Oil and Gas Production
- IC Engine, CI Emergency with DPF

Minor Sources

Part C – Policy & Procedures

- Chapter 1
 - Part D BACT Determinations adoption date clarification
 - Updated Cost Effectiveness values - Marshall & Swift Equipment Cost Index
 - Updated quarterly – no longer published in Chemical Engineering Magazine
 - Top-Down cost methodology
 - Link reference to EPA Control Cost Manual
 - Clean Fuel Requirements “fire suppressant pump ICEs”
 - Updated BACT Update Process flowchart, Fig. 2
 - Same “Other Considerations” section as Part A
- Chapter 2
 - Super “Compliant” Materials
 - Other Considerations – same as Part A

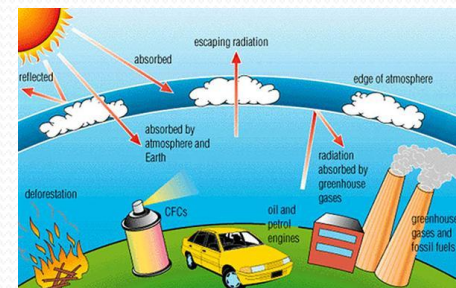


Minor Sources (cont'd)

- **Part D – BACT Determinations**
 - **Hyperlinks on Table of Contents**
 - **Boiler**
 - **IC Engine, Stationary, Emergency**
 - **IC Engine, Portable**
 - **IC Engine, Stationary, Non-Emergency, Non-Electrical Generators**
 - **IC Engine, Stationary, Non-Emergency, Electrical Generators**
 - **Liquid Transfer and Handling**
 - **Process Heater – Non-Refinery**
 - **Oil and Gas Production**

Part E – Policy and Procedures for Facilities Subject to PSD for Greenhouse Gases (GHG)

- Regulation XVII applicability – Prevention of Significant Deterioration
- Facilities are subject to GHG BACT if:
 - New or Modification of existing source increase potential to emit by 100 or 250 tons/year depending on source category; and
 - Have potential to emit >75,000 tons/year of carbon dioxide equivalent (CO_{2e})
- Must be subject to PSD for a pollutant other than GHG
- Tailoring Rule undergoing revision - U.S. Supreme Court decision in *Utility Air Regulatory Group v. Environmental Protection Agency*, 134 S. Ct. 2427 (2014) .



Part F – BACT Determinations for Facilities Subject to PSD for GHG

- **Work in Progress**
- **EPA Guidance emphasizes options that improve energy efficiency and possibly biomass**
- **Carbon Capture and Sequestration may be considered but likely cost prohibitive**
- **Potential impacted sources include:**
 - ✓ **Electricity Generation**
 - ✓ **Large industrial/commercial boilers**
 - ✓ **Cement industry**
 - ✓ **Refineries**
 - ✓ **Iron and Steel industry**

List of Abbreviations & Index of Equipment Categories

- Included new or previously omitted terms
- Changed title to “List of Equipment Categories”
- Updated categories

Other Business

- Next Steps
 - 30-Day Review for comments
 - Develop Board Letter package
 - Stationary Source Committee
 - Targeting July/August Board Approval
 - Future updates
- AB1234 Ethics Training
 - www.fppc.ca.gov (free on line course)
- Revised BACT Determination Form
- Date of next meeting



SCAQMD's BACT Guidelines

www.aqmd.gov/home/permits/bact

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