U.S. EPA INNOVATIONS CONFERENCE

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CALIFORNIA AIR RESOURCES BOARD CONSUMER PRODUCTS PROGRAM

CONSUMER AND COMMERCIAL PRODUCTS REGULATIONS

INNOVATIVE REGULATORY PROVISIONS

Consumer Products Program

- California Clean Air Act requires ARB to regulate consumer products
- Consumer products:
  - Chemically formulated
  - Used by household and institutional consumers
  - Include household, home and garden, aerosol paint, personal care, automotive specialty (care) products, etc.
- Consumer products do not include other paint products, furniture coatings or architectural coatings

Program Principles

- Program goal: reduce volatile organic compound (VOC) emissions from consumer products used in households and institutions
- Regulations must be technologically and commercially feasible
- May not eliminate a product form
- Environmental and economic impacts of regulations must be addressed

Consumer Products Regulations

- Found in Title 17, California Code of Regulations, Sections 94500 to 94575
  - Antiperspirants and Deodorants (Article 1)
  - Consumer Products (Article 2)
  - Aerosol Coating Products (Article 3)
  - Alternative Control Plan (Article 4)
  - Hairspray Credit Program (Article 5)

Steps to Regulate Consumer Products

Control Plan 1989

AP/DO 1989

Phase I and Phase II 1990 1992

ACP 1994

Aerosol Coatings 1995 1998 2000

Mid-term Measures I & II 1997 1999

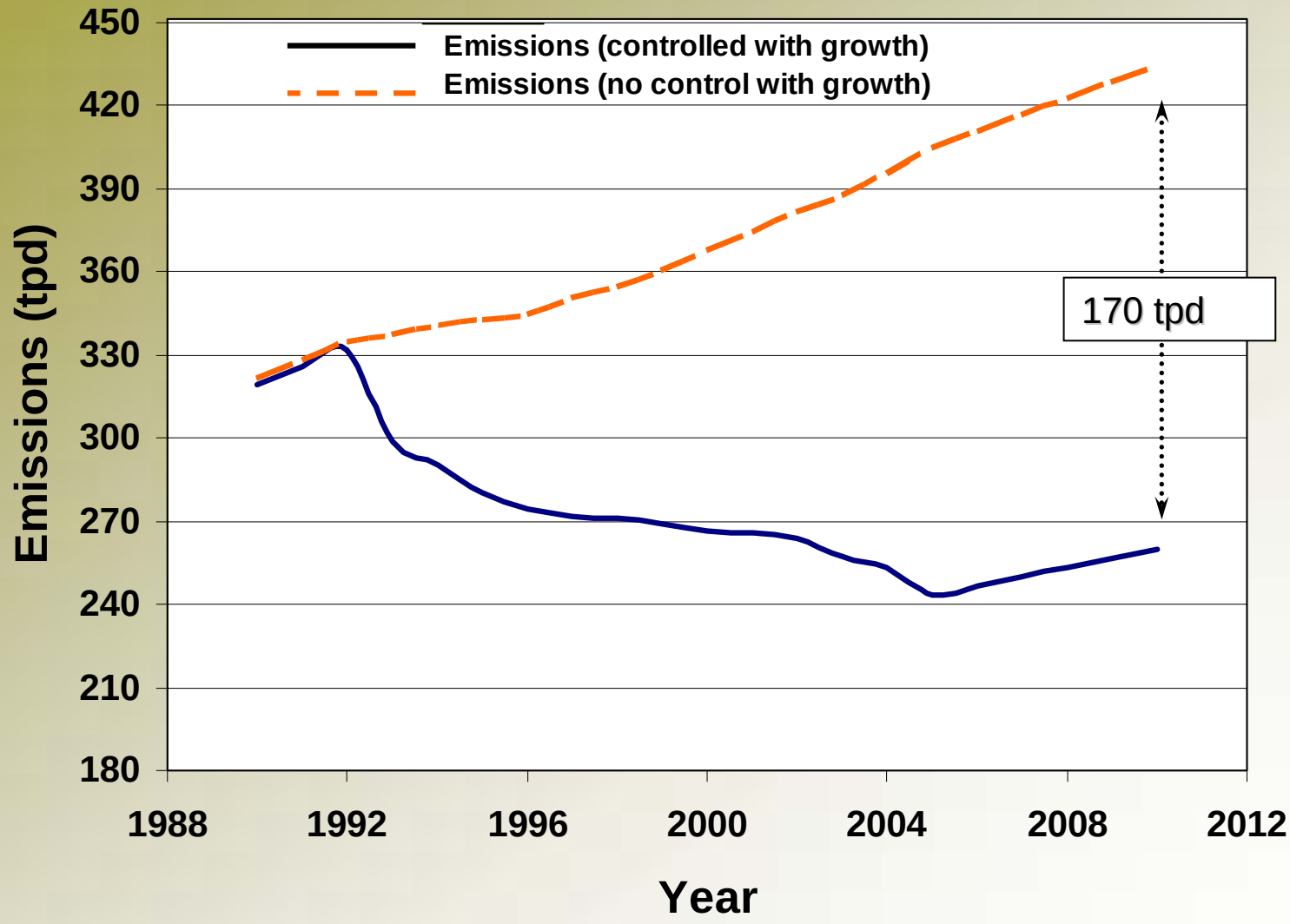
Cons-1 2004

Cons-2 2006

Cons-2 2008

Consumer Products

Emissions Trend



Regulatory Actions

Planned for Cons-2

- **First Action**
  - 10-15 tons per day VOC emission reduction goal
  - 2003 Consumer & Commercial Products Survey conducted in 2005
  - Scheduled Board hearing dates:
    - November 2006
    - March 2007
- **Second Action**
  - Remaining VOC emission reduction to meet 20-35 tons per day commitment
  - 2006 Consumer & Commercial Products Survey planned for 2007

CURRENT COMPLIANCE STRATEGIES

Current Compliance Strategies

- Emission reduction strategies available under existing regulations
  - Product reformulation
  - Photochemical reactivity (Aerosol Coatings)
  - Alternative Compliance Plan (ACP)
  - Innovative Product Exemption (IPE)

Product Reformulation

- Traditional response to regulations using command-and-control approach
- Challenges
  - VOCs are “actives” or “carry” active ingredients
  - Commercial and technological feasibility must be preserved
  - Avoid increasing use of TACs

Photochemical Reactivity Concepts

- Reactivity - Measure of a VOC's potential to react in the atmosphere and lead to the formation of ozone
- Use of "lower reactive" VOCs may provide means for ozone reduction benefit where mass-based VOC reductions are not feasible
- Flexible approach that gives manufacturers more reformulation options

History of Investigating Reactivity in Regulations

- Basis for Reactivity Adjustment Factors in Low Emission Vehicle and Clean Fuels Regulations
- Research funded to improve science
- State Implementation Plan
- Reactivity Scientific Advisory Committee (RSAC) advises on use of science

Maximum Incremental Reactivity Scale

- Allows comparison of VOC reactivities
- Basis for scale peer-reviewed
- “State of the State” science
- Scientific basis sufficient to use reactivity in a more detailed manner

Reactivity Applied to Aerosol Coatings

- Currently the only ARB reactivity-based consumer products regulation
- Uses Maximum Incremental Reactivity (MIR) scale
- Accounts for low negligibly reactive compounds
- No exempt VOCs

Aerosol Coatings Regulation

Approved By U.S. EPA

- Final Notice Publication
  - Federal Register, Vol. 70, No. 176, September 13, 2005, Pages 53930-53935

Future Implementation of Reactivity Based Standards?

- Staff will consider in current and future rulemakings
- Only will be considered where mass VOC reduction opportunities are exhausted
- Staff are considering in current rulemaking for Hairspray and Nail Coating Products

Reactivity Approach Considerations

- Some compounds not yet tested
- Significant Public/Industry education needed
- Mixing and matching of mass and reactivity based standards is not appropriate

Alternative Control Plan Regulation

- Voluntary, market-based regulation employing aggregate emissions cap for VOC
- Applies only to consumer products that are subject to the VOC standards
- Allows manufacturers to average, or "bubble," their emissions from non-complying products with those from products that more than meet the standard

Innovative Products Exemption (IPE)

- Provides additional flexibility for manufacturers
- If a manufacturer provides clear and convincing evidence that VOC emissions will be reduced below the regulatory limit as a result of some characteristic of the product, the product will be exempted from VOC limits
- Allows manufacturers to exceed VOC limits if they can demonstrate alternative ways of lowering emissions
- Some restrictions apply

Advantages of IPE

- Allows product to exceed VOC limit if:
  - Product will result in less VOC emissions during actual use
  - Compared to a complying <u>Representative Product</u> of the same product category

Innovative Product Features

- More efficient application technique of product
- Greater percent of active ingredients
- Effective active ingredients
- Active ingredients delivered more effectively

Application Procedure

- Pre-application meeting recommended
- Written Application
  - Supporting documentation that demonstrate the emissions from the innovative product
  - Any information necessary to use to establish enforceable conditions including product VOC content, formulation data and innovative features
- ARB Confidentiality Regulation

Other Requirements

- Representative Product
- Diagrams of key product components
- Product labels and use instructions
- Laboratory testing demonstrating product performance and emissions levels
- Consumer Use and Acceptance Studies

Other Requirements

(continued)

- Consumer Use and Acceptance Studies
  - “Representative” type of customers chosen
  - Describe testing parameters
  - Statistical analysis and level of significance (confidence limit)
- Required number of studies and participants can vary

Application Processing

- Complete/Incomplete Application Determination: 30 days
- Approval/Disapproval Decision: 90 days (after complete determination)
- Mutually agreed upon extensions
- Issue Executive Order (EO) with Terms and Conditions establishing enforceable conditions

Questions?

Program Contacts

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Websites

- **Consumer Products website:**
  http://www.arb.ca.gov/consprod/consprod.htm
- **Consumer Products Regulations website:**
  http://www.arb.ca.gov/consprod/regs/regs.htm
- **Consumer Products Enforcement website:**
  http://www.arb.ca.gov/enf/consprod.htm
- **Consumer Products Enforcement Advisories:**
  http://www.arb.ca.gov/enf/advs/cpadvisory.htm
- **Consumer Products List Server website:**
  http://www.arb.ca.gov/listserv/listserv.php