

Candidate Control Measures for Consumer and Commercial Products



Regional Air Quality Workshop

June 29, 2005

Prepared By:

Edward Sabo

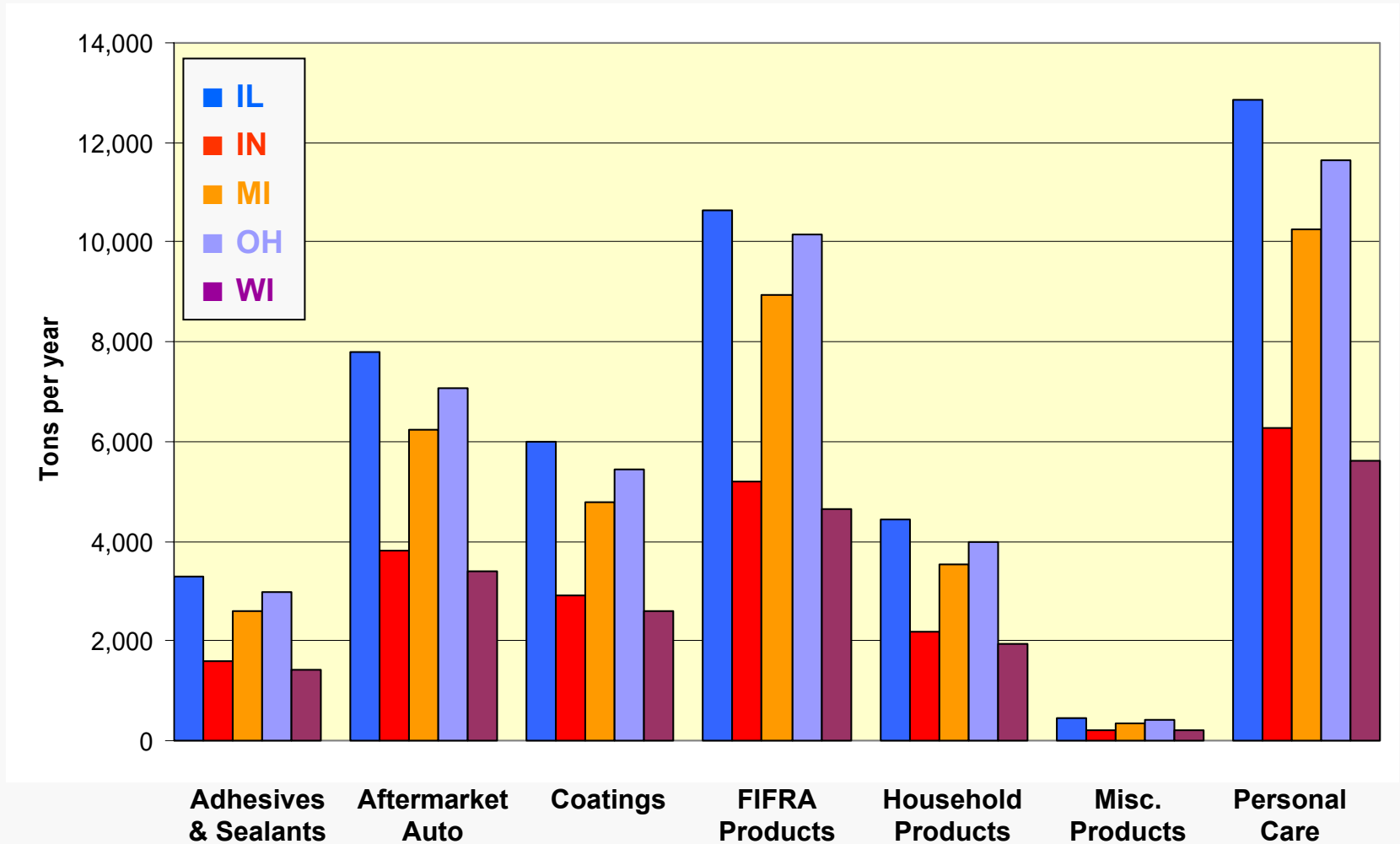
MACTEC Federal Programs, Inc.

ejsabo@mactec.com

Category Description: Consumer and Commercial Products

- Items sold to retail customers
- Products marketed by wholesale distributors for use in commercial or institutional settings such as beauty shops, schools, hotels, and hospitals
- Hundreds of individual products containing VOC
 - personal care products
 - household products
 - automotive aftermarket products
 - adhesives and sealants
 - FIFRA-related insecticides
 - coatings and related products (except architectural and maintenance coatings)
 - other miscellaneous products.
- Account for about 5.9% of the total anthropogenic VOC emissions in the MRPO region in 2002

VOC Emissions By State and Subcategory: Consumer and Commercial Products



Regulatory History: Consumer Products Federal Rule

- EPA published the Consumer Products rule on Sept. 11, 1998 (40 CFR Part 59 Subpart D)
 - Authority under CAA Section 183(e)
 - Limits the VOC content of 24 product categories representing 48 percent of the consumer and commercial products inventory nationwide
 - VOC content limits took effect on September 11, 1999
 - VOC reductions of 20% from uncontrolled for products covered by the rule
 - Only half of all consumer products are covered
 - Net result is 9.7% reduction from uncontrolled levels

Regulatory History: Consumer Products

Non-MRPO State Rules

- CARB has been regulating consumer and commercial products since 1989
 - Original rule for antiperspirants and deodorants
 - Early 1990s, Phase I/II amendments affected 26 additional consumer products.
 - In 1995, CARB adopted an aerosol coatings regulation,
 - In 1997 and 2000, “mid-term” measures
 - Current regulations contain nearly 200 emission limits affecting 82 categories of consumer products, plus limits for 35 categories of aerosol coatings.
 - 2003, CARB adopted a statewide SIP strategy
 - 2006 measure would achieve about a two percent reduction from consumer products
 - 2010 measure would achieve an additional 8-14 percent reduction Ozone Transport Commission
- Ozone Transport Commission (OTC) Model Rule
 - More stringent VOC content limits than the Federal rule
 - Additional consumer product categories
 - Similar to CARB “mid-term” measures
 - Emission reductions are estimated to be 14.2% beyond the national rule
 - Adopted in DC, DE, ME, MD, NJ, NY, PA, VA
 - Considering in CT, MA, NH, RI, VT

Regulatory History: Consumer Products

MRPO State Rules

- None of MRPO States have rules that go beyond the requirements of the Federal Part 59 rule

Available Control Measures: Consumer Products

- Can involve one or more of the following approaches:
 - Replacing VOC solvents with a water-based formulation
 - Replacing VOC solvents with acetone or another exempt solvent
 - Increasing the solids content of the product
 - Formulating a non-VOC propellant
 - Changing the valve, container, or delivery system to reduce VOC emissions

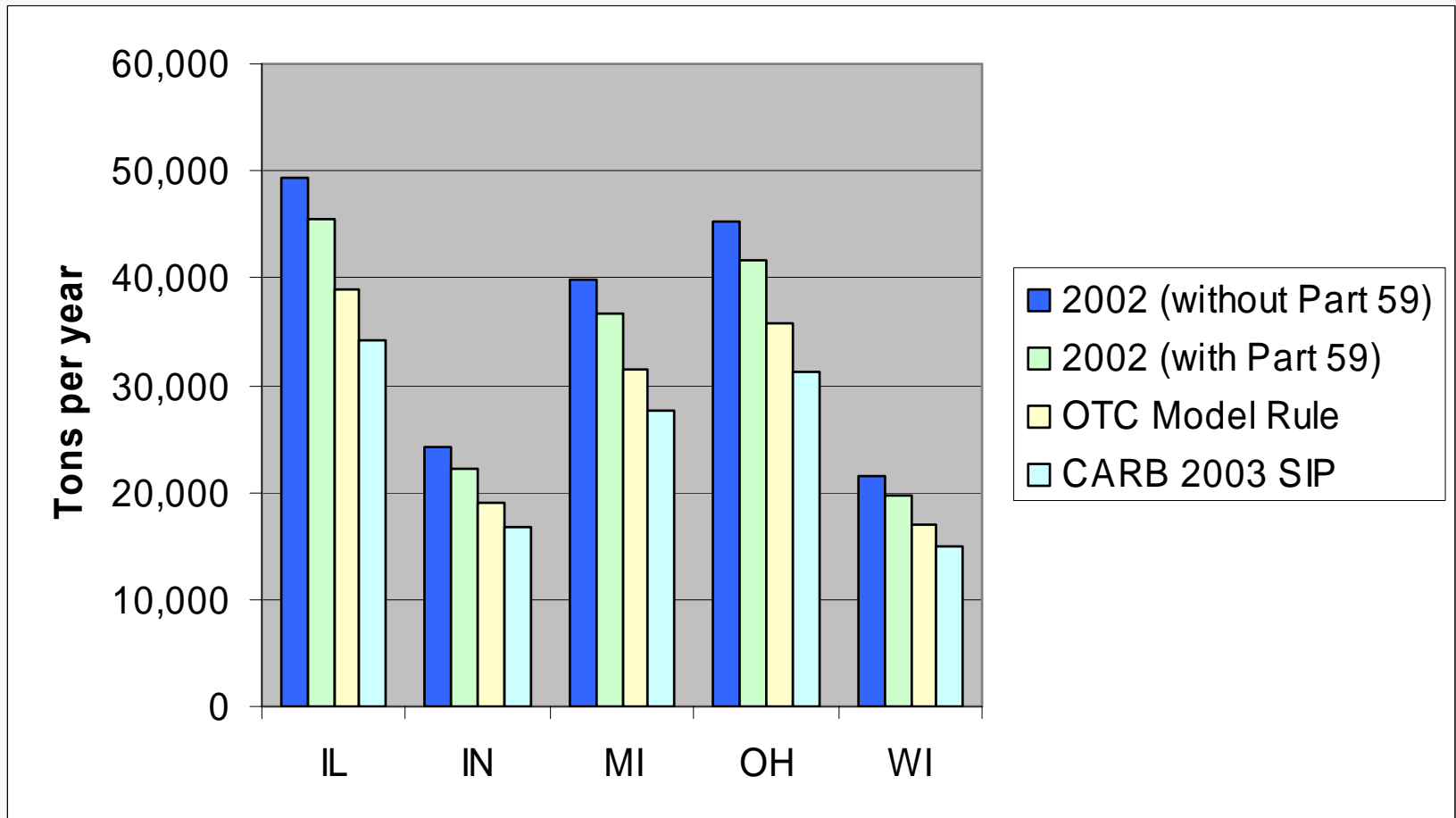
Candidate Control Measures: Consumer Products

- *Measure SOLV2A – Adopt OTC Model Rule for Consumer Products*
 - Regulates more consumer products
 - Establishes more stringent VOC limits than the Federal Part 59 rule
 - Achieves VOC emission reductions through the use of product reformulation and product substitution
 - Limits are based primarily on the CARB mid-term limits adopted in 1997 and 2000
 - Emission reductions are estimated to be 14.2% beyond reductions from the Federal Part 59 rule

Candidate Control Measures: Consumer Products

- *Measure SOLV2B – Adopt CARB 2003 SIP Requirements for Additional Products and VOC Limits (in addition to OTC Model Rule)*
 - CARB sets or revises VOC limits for about 13 categories that must be complied with by December 31, 2006
 - CARB committed to develop rules between 2006 and 2008 to adopt new limits for consumer products (either mass-based or reactivity-based) as well as to set limits for previously unregulated categories
 - Combined emission reductions from implementation are estimated to be between 9.7-15.5% from current levels

VOC Emissions For Consumer Products Candidate Control Measures



Cost Effectiveness: Consumer Products

- OTC Model Rule - \$800 per ton VOC
 - Based on CARB mid-term limits rulemaking
- CARB 2003 SIP - \$4,800 per ton VOC
 - CARB currently evaluating costs for longer term measures

Other Issues: Consumer Products

- Timing for reductions
 - Ozone SIPs in 2007, compliance by 2009
 - “Sell through” provisions
 - Creates time for manufacturers to reformulate while continuing to sell and deplete their existing inventories
 - Some of CARB 2003 SIP limits have not yet been established
 - Unlikely that emission reductions could be achieved by 2009
- Geographic applicability
 - Implemented across the MRPO region
 - Maintain consistency and uniformity for manufacturers
- Rule Effectiveness and Rule Penetration
 - Rule effectiveness (RE) is an adjustment to account for failures and uncertainties that affect the actual performance of the control measure
 - Because emissions will be controlled via reformulations, the EIIP guidance recommends that the rule effectiveness (RE) can be assumed to be 100 percent for all coating types affected by the rule
 - Rule penetration (RP) is the percentage of the area source category that is expected to be complying with the regulation
 - Not all products will be expected to comply by 2009, so the rule penetration (RP) is estimated to be 80 percent

Questions? Consumer Products

