



South Coast Air Quality Management District

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November 1, 2011

William Driscoll
Executive Director
Ozone Transport Commission
Hall of the States
444 North Capital Street, Suite 638
Washington, DC 20001

Reference: Proposed 2014 Ozone Transport Commission (OTC) Model Rule for Consumer Products

Dear Mr. Driscoll:

The South Coast Air Quality Management District (AQMD) staff appreciates the opportunity to provide comments on the Proposed 2014 OTC Model Rule for Consumer Products. It is our understanding that the Proposed 2014 OTC Model Rule for Consumer Products is currently in draft form but will be going to your governing board for adoption on November 10, 2011.

AQMD staff supports Proposed 2014 OTC Model Rule for Consumer Products, but requests you consider our comments that would further strengthen the emission reduction benefits of the rule before it goes to your governing board on November 10, 2011. The AQMD is providing comments in the following areas, which are further detailed in the letter:

- Low-Vapor Pressure - Volatile Organic Compounds (LVP-VOC) exemption
AQMD staff recommends removing this exemption
- Three percent by weight limit effective January 2014
AQMD staff recommends a more immediate effective date
- Aromatic and toxic compounds concerns
AQMD staff supports the one percent maximum limit for aromatic compounds
- Product labeling requirements and flammability issues
AQMD staff has worked in conjunction with local fire authorities to develop appropriate labels, as well a comprehensive education and outreach program that addresses the original flammability concerns

DEFINITIONS FOR VOC AND LVP-VOC IN OTC'S PROPOSED MODEL RULE

AQMD staff has concerns regarding the allowance of compounds that may qualify as a LVP-VOC and may be eligible for exemption from the VOC limits in your Proposed Model Rule for Consumer Products. Attachment 1 summarizes a list of commonly found LVP-VOCs in Consumer Products, including the Maximum Incremental Reactivity (MIR) values that range from 0.37 to 4.98. AQMD staff recommends that OTC does not allow an exemption for LVP-VOC compounds unless the MIR of a compound is below ethane's MIR, which is the criteria used by USEPA for exempt compound determination. A large number of LVP-VOC compounds

readily evaporate and have MIR values > 0.4, and therefore have a significant potential to contribute to ozone formation. AQMD staff has submitted similar concerns to California Air Resources Board's (CARB) Consumer Products Regulations over the past 4 years. Furthermore, AQMD staff has conducted evaporation studies on numerous of LVP-VOC compounds, both in an accelerated oven (40°C) and under ambient conditions (70°F, 45% relative humidity - average) and found that many exhibit high evaporation rates similar to highly volatile VOC solvents. Specifically, Conosol 200, a favored LVP-VOC compound by some manufacturers of multi-purpose solvents, evaporates at a similar profile to that of Isopropyl Alcohol (IPA) under ambient conditions. Propylene Glycol and Ethylene Glycol, most commonly used as co-solvents in waterborne coatings, are also considered LVP-VOCs, but readily evaporate as well and are regulated as VOCs in paint regulations. Therefore, AQMD staff do not support an exemption for LVP-VOC compounds and urge OTC to further study the evaporation characteristics of these compounds and truly assess their impacts on ozone formation. AQMD staff can provide a summary of the oven/ambient evaporation studies upon request.

3% BY WEIGHT VOC LIMIT - EFFECTIVE JANUARY 1, 2014

AQMD staff supports the 3% by weight VOC limit in the Proposed 2014 OTC Model Rule for Consumer Products, and does not believe the 3% by weight VOC limit is commercially or technologically infeasible as some members of the industry indicated in their comments. AQMD staff recognizes that CARB did address stakeholder concerns during the adoption of the Consumer Products Regulation and consequently added a provision to conduct a Technology Review for paint thinners that contain no more than 3% by weight VOC. Pursuant to reporting requirements in Rule 1143, staff has collected data on numerous products that meet the 25 g/L VOC limit (which is equivalent to 3% by weight VOC limit), including paint thinners that do not include LVP-VOCs. These products are currently sold and used in the AQMD, and OTC should consider an earlier implementation date, since the proposed limit is commercially and technologically feasible today.

AROMATIC & TOXIC COMPOUND CONCERNS

AQMD staff supports clauses (3)(p)(1)(i) and (3)(p)(1)(ii) in the Proposed 2014 OTC Model Rule for Consumer Products which states "no person shall sell, supply, offer for sale, or manufacture for use in (OTC STATE) any multipurpose solvent or paint thinner that contains any of the following: (i) methylene chloride, perchloroethylene, or trichloroethylene; or (ii) greater than 1% Aromatic Compound content by weight."

PRODUCT LABELING REQUIREMENTS AND FLAMMABILITY ISSUES

Based on feedback from fire agencies, AQMD and CARB required specific labeling options to address flammability concerns pertaining to the substitution of a combustible solvent with a flammable or extremely flammable solvent in paint thinners. Furthermore, the AQMD also included the following public awareness and education campaign:

- A public service announcement in English and Spanish
- Brochures in English, Spanish, Vietnamese, and Korean

The videos are available on AQMD's, CARB's, and fire agencies' websites, as well as other social media outlets, and the brochures are further disseminated through retail outlets located within the AQMD.

AQMD staff strongly supports the rulemaking efforts for the Proposed 2014 OTC Model Rule for Consumer Products and can provide additional assistance with technical information pertaining to compliant products, LVP-VOC studies, and the public awareness and outreach campaign. AQMD Rule 1143 continues to provide the residents in the AQMD jurisdiction with relief from excessive volatile organic compound emissions, with concurrent ozone reduction benefits, that may not occur with the exemption of LVP-VOCs. We look forward to working with OTC with a mutual goal for healthier air quality for all residents.

Thank you again for the opportunity to provide our comments on the Proposed OTC 2014 Model Rule for Consumer Products. If you have any questions, please contact me at (909) 396-2363.

Sincerely,



Naveen Berry,
Manager
Planning, Rule Development and Area Sources

Attachment

Attachment – List of LVP Compounds reported to CARB

LVP Compound Name ¹	CAS #	MIR ²
Dimethyl Glutarate ³	1119-40-0	0.37
2,2,4-Trimethyl-1,3-Pentanediol Isobutyrate (Texanol)	25265-77-4	0.76
Dibutyl Phthalate	84-74-2	1.20
Diisopropyl Adipate	6938-94-9	1.22
1-Tetradecene	1120-36-1	1.27
Diethylene Glycol n-Butyl Ether Acetate	124-17-4	1.30
2-Methyl-2,4-Pentanediol	107-41-5	1.39
Diethylene Glycol Monoethyl Ether Acetate	112-15-2	1.39
Diethylene Glycol Mono(2-Ethylhexyl) Ether	1559-36-0	1.46
Propylene Glycol Phenyl Ether	770-35-4	1.54
Tripropylene Glycol n-Butyl Ether	55934-93-5	1.55
Diethyl Phthalate	84-66-2	1.56
C13 Benzenes	N/A	1.67
Dimethyl Adipate	627-93-0	1.72
Diethylene Glycol Monohexyl Ether	112-59-4	1.73
Dipropylene Glycol n-Propyl Ether	29911-27-1	1.73
Triethylene Glycol Monobutyl Ether	143-22-6	1.85
Ethylene Glycol Monohexyl Ether	112-25-4	1.98
Tripropylene Glycol	24800-44-0	2.07
Triethylene Glycol Monoethyl Ether	112-50-5	2.33
Diethanolamine	111-42-2	2.36
Triethylene Glycol Monomethyl Ether	112-35-6	2.44
Propylene Glycol	57-55-6	2.48
Phthalic Anhydride	85-44-9	2.50
C13 Olifins	N/A	2.51
Triisopropanolamine	122-20-3	2.60
1,4 Butanediol	110-63-4	2.61
Diethylene Glycol Propyl Ether	6881-94-3	2.71
C13 Tetralin	N/A	2.77
Diethylene Glycol Monobutyl Ether ³	112-34-5	2.87
Ethylene Glycol ³	107-21-1	3.01
Diethylene Glycol Monoethyl Ether ³	111-90-0	3.11
Triethylene Glycol	112-27-6	3.11
1,3 Butanediol	107-88-0	3.21
Diethylene Glycol ³	111-46-6	3.23
Triethanolamine	102-71-6	4.08
Ethylene Glycol Phenyl Ether	122-99-6	4.35
Benzyl Alcohol ⁵	100-51-6	4.98
C13 Alkanes	N/A	0.54-0.64
C13 Alkenes	N/A	1.95-2.49
C13 Naphthalenes	N/A	2.47-4.44
C13 Disubstituted Benzenes	N/A	3.03-4.80
C13 Trisubstituted Benzenes	N/A	5.20-7.04
Dibasic Ester (Rhodia Designer Solvent) ^{3,6}	N/A	N/A

1. List of solvents is from CARB's FORM 4 Speciation Table of LVP-VOCs

2. UPDATED MAXIMUM INCREMENTAL REACTIVITY SCALE AND HYDROCARBON BIN REACTIVITIES FOR REGULATORY APPLICATIONS, Dr. William Carter, June 2009

3. Commonly Used in Paints, Cleaning, and Ink Products - Considered a VOC in CARB's Architectural Coatings Suggested Control Measure

4. MIR value lower than Ethane - Could qualify for VOC Exemption

5. Previously tested by SCAQMD - 100% VOC

6. Not on CARB LVP List - Manufacturer claims Non-VOC under CARB Consumer Products Regulation LVP Exemption