



September 22, 2009

*Via email*

David Mallory, P.E.  
Manager, Measures Development Section  
Stationary Source Division  
California Air Resources Board  
1001 I Street, 6<sup>th</sup> Floor  
P.O. Box 2815  
Sacramento, CA 95812

Subject: Proposed Amendments to the California Consumer Products Regulations; Board Agenda Item # 09-8-4

Dear Mr. Mallory:

The Solvents Industry Group (“SIG”)<sup>1</sup> of the American Chemistry Council is pleased to provide the following comments on the California Air Resources Board’s (“CARB” or “Board”) *Proposed Amendments to the Regulation for Reducing Emissions from Consumer Products and Revisions to Test Method 310* (“Proposed Amendments”), as updated by CARB’s “Staff’s Suggested Modifications to the Original Proposal.” The proposal would establish, *inter alia*, tiered, ultra-low, mass-based volatile organic compound (“VOC”) standards for multi-purpose solvents, paint thinners and double phase aerosol air freshener. As solvent manufacturers that conduct business in the state of California, SIG member companies must be considered part of the regulated industry for this proposal. Therefore, SIG would be significantly and negatively affected by this unbalanced proposed regulation. As discussed in these comments, SIG requests that CARB suspend consideration of the proposed amendments based on the following concerns:

- Reactivity-based standards more effectively reduce the ozone-forming potential of solvent-based products while providing formulators with greater flexibility to produce products that meet performance and safety specifications.<sup>2</sup> SIG strongly supports the adoption of reactivity-based standards either as the sole compliance option or at least as an alternative compliance option for product categories, including paint thinners and multipurpose solvents.
- CARB has not met its legal burden of demonstrating that its proposed regulations are commercially and technologically feasible and necessary.
- CARB’s proposed aromatics prohibition is arbitrary and capricious.

---

<sup>1</sup> SIG represents major U.S. manufacturers of hydrocarbon and oxygenated solvents and was formed to address health, safety, and environmental issues affecting both the producers and users of those materials. Members of SIG include: The Dow Chemical Company, ExxonMobil Chemical Corporation, Shell Chemical LP, and Eastman Chemical Company.

<sup>2</sup> See William P. L. Carter, *Development of Ozone Reactivity Scales for Volatile Organic Compounds*, 44 J. Air & Waste Mgmt. Ass’n 881 (1994); A. Russell *et al.*, *Urban Ozone Control and Atmospheric Reactivity of Organic Gases*, 269 Science 491 (1995).



- CARB has not considered and evaluated a reactivity-based approach as a reasonable alternative to its mass-based proposal as required by Government Code section 11346.2.
- Interested stakeholders have not had the opportunity to review and comment on the full detail of CARB's 2008 Paint Thinner and MPS survey update.
- Current proposal would result in the formulation of consumer products that pose a significantly higher fire risk to consumers and the public.

## **I. General Position**

SIG has long worked with CARB, South Coast Air Quality Management District, Bay Area Air Quality Management District, other air quality management districts in California, and the U.S. Environmental Protection Agency ("EPA") on regulations and policies to reduce tropospheric ozone. SIG's own research and investigations, as well as many other independent studies, including those undertaken by CARB, Dr. William Carter, the University of North Carolina, and Georgia Tech, have consistently concluded that the most efficient and cost effective means of regulating consumer products emissions and obtaining meaningful ozone reductions is through reactivity-based regulations. As is often the case, CARB and the State of California have been leaders in this progressive approach to regulating ozone. Mass-based approaches, in stark contrast, are outdated, inefficient, needlessly rigid, and potentially counterproductive to the overall goal of ozone reduction. SIG strongly supports the adoption of reactivity-based standards either as the sole compliance option or at least as an alternative compliance option for product categories, including paint thinners and multipurpose solvents.

Importantly, SIG is also concerned that CARB has not met its legal burden of demonstrating that its proposed regulations are commercially and technologically feasible and necessary. For example, CARB is proposing to adopt a 3 percent tier 2 standard that it acknowledges "has not been demonstrated," at least for thinners, and the impacts of which cannot be "fully assess[ed]" until more information is obtained. At the very least, CARB has not provided interested stakeholders with sufficient information to weigh in meaningfully on its feasibility determinations. Although the Initial Statement of Reasons suggests otherwise, CARB has not released the full detailed results of its 2008 survey update, which according to the staff report serve as the primary bases of this proposal. Before adopting a final amendment, CARB must afford SIG and other stakeholders with an opportunity to evaluate and comment on this critical information. SIG also opposes CARB's aromatic restriction as arbitrary and capricious. If CARB wants to adopt reactivity concepts, it should do so completely as a sole compliance option or as an alternate control plan and not in a piecemeal and one-sided fashion.

SIG is disappointed that CARB has not considered and evaluated a reactivity-based approach as a reasonable alternative to its mass-based proposal as required by Government Code section 11346.2. Reactivity-based standards offer a legitimate and cost-effective alternative, and thus must be evaluated. Such an evaluation would reveal the benefits and superiority of reactivity standards.

SIG is also concerned, like CARB itself was during SCAQMD's recent promulgation of Rule 1143 that adoption of CARB's proposal would result in the formulation of consumer products that pose a higher fire risk to consumers and the public. Indeed, CARB was sufficiently concerned with this issue that it solicited the input of the Office of the State Fire Marshall on Rule 1143 and submitted comments on this specific issue to SCAQMD in December 2008. Despite its expressed concerns, CARB has nevertheless proposed a state-wide rule that would create the same public health risk as Rule 1143. And although SIG supports the rule's proposed notification and marking requirements, CARB has not explained or provided support for how such requirements would significantly abate the acknowledged public hazards that will undoubtedly result from the proposal.



For these and the other reasons provided below, SIG urges the Board to table its mass-based proposal and to instead pursue a reactivity-based approach. CARB has all the tools necessary to develop, implement, and enforce such an approach, and to do so now. Alternatively, SIG requests that CARB delay its consideration of the staff proposal until interested stakeholders have had a chance to review and comment on the full detail of CARB's 2008 Paint Thinner and MPS survey update. SIG further requests that CARB postpone consideration of its Tier 2 standards until at least 2012 when additional feasibility and safety data will be available.

## **II. Reactivity Is More Effective And Efficient At Reducing Ozone than Mass-Based Approaches.**

Photochemical reactivity is a scientifically sound and more effective means of addressing tropospheric ozone. It is a better predictor of the ozone-forming potential of solvent based VOCs than mass-based measurements and therefore serves as a superior basis for reducing ozone formation.<sup>3</sup> This is due to the varying reactivities of different solvent VOCs, which, as even CARB notes in the April 1, 2009 workshop materials, are determinable in a laboratory and subject to peer review.<sup>4</sup> Research demonstrates that VOC reactivities vary significantly, by as much as 100-fold.<sup>5</sup> In contrast, mass-based limits implicitly – and erroneously – assume that all VOCs have the same potential to contribute to ozone levels. Because mass-based limitations create an incentive for product manufacturers to use more active (and often more reactive) VOCs, lowering mass-based limits also may well lead to an increase in the use of more reactive solvents in product formulations, limiting the effectiveness of the proposed regulations and in some cases, increasing overall VOC emissions on a product category basis.<sup>6</sup> As discussed in more detail below, although CARB's proposal would prevent erosion of air quality gains attributable to the increased use of aromatics, it would not prevent formulators more generally from meeting lower mass-based limits by substituting lower-reactive VOCs with higher-reactive ones.

Mass-based limits arbitrarily set too low may force formulators to utilize highly-reactive compounds to achieve desired product performance that, in turn, form larger quantities of ozone than otherwise would have been produced. In fact, instances in which mass-based regulation yielded less-than-

---

<sup>3</sup> See William P. L. Carter, *Development of Ozone Reactivity Scales for Volatile Organic Compounds*, 44 J. Air & Waste Mgmt. Ass'n 881 (1994); A. Russell *et al.*, *Urban Ozone Control and Atmospheric Reactivity of Organic Gases*, 269 Science 491 (1995).

<sup>4</sup> See William P. L. Carter, *Reactivity Estimates for Selected Consumer Product Compounds* (Feb. 19, 2008) at Table C-1 (listing VOCs for which ozone impact estimates are available); see also CARB, *Workshop Presentation* at Slide 23 (April 1, 2009), available at [http://www.arb.ca.gov/consprod/regact/tscpwg/cpworkshop04\\_01\\_09.pdf](http://www.arb.ca.gov/consprod/regact/tscpwg/cpworkshop04_01_09.pdf).

<sup>5</sup> Letter from Courtney M. Price, ACC, to EPA Docket ID. No. OAR-203-0200, at 2 (Mar. 2, 2005). See also William R. Stockwell, *Review of the Updated Maximum Incremental Reactivity Scale of Dr. William Carter*, at 1 (Nov. 29, 1999) (“The contribution of each VOC to the formation of ozone is different because each has a different oxidation mechanism in the atmosphere. The ozone formation potential has been characterized by several different measures . . .”).

<sup>6</sup> See, e.g., *National Volatile Organic Compound Emission Standards for Aerosol Coatings*, 72 Fed. Reg. 38,952, 38,963, 38,962 (July 16, 2007) (proposed rule) (“EPA recognizes that individual VOC can react differently in the atmosphere and can vary in the amount of ozone generated.” Furthermore, “[I]f the VOC content limits are [set] too low manufacturers may be forced to use more reactive solvents to achieve comparable product performance. For example, . . . manufacturers may have to increase the usage of toluene and xylene in order to reformulate to a higher solids coating. Both toluene and xylene are very reactive compounds and have the potential to form significantly larger quantities of ozone than many other solvents. If manufacturers use VOC with higher reactivities, it is possible that decreasing the VOC content of the coating potentially increases the actual ozone formation.”).



satisfactory VOC emission reductions have been noted in the past.<sup>7</sup> It is irrational to anticipate that formulators will simply reduce the quantity of existing VOCs in products without making substitutions to maintain product performance. Another unintended consequence of the Proposed Amendments would be reduced product performance. A reactivity-based approach, by contrast, will minimize ozone formation potential because formulators will not be restricted to compensating for low-VOC compound volumes with highly-reactive constituents. Under a reactivity-based approach, formulators will have the flexibility to create better performing products for the market while ensuring that atmospheric impacts from VOC emissions are reduced. Such an approach benefits consumers, industry, the environment, and public health.

If CARB's desire is to achieve a certain overall reduction in ozone formation that is at least equivalent to reductions achievable through mass-based reductions, it can easily back calculate product-weighted MIR limits to achieve that outcome. Such an approach would be far superior to CARB's proposed mass-based standard and supplemental aromatics restriction.

### **III. Reactivity-Based Standards Are Already Being Successfully Implemented By CARB.**

Reactivity-based standards are already in effect in California, having successfully been implemented by CARB in its 2001 aerosol coatings rule. Thus, there is an existing regulatory and policy framework that supports the further development and implementation of reactivity-based standards.

EPA has also recognized the superiority of a reactivity-based regulatory approach, based largely on CARB's own experience in the area. For example, EPA approved California's own reactivity-based rule governing VOC emissions from aerosol coatings products in 2005.<sup>8</sup> That same day, EPA issued an interim guidance, recommending to the states that they explore adopting reactivity-based approaches in their State Implementation Plans.<sup>9</sup> EPA then adopted a reactivity-based standard for aerosol coatings in 2008, based on California's rule, and has recently proposed to add additional compounds and reactivity factors.<sup>10</sup>

---

<sup>6</sup> *Revisions to the California State Implementation Plan and Revision to the Definition of Volatile Organic Compounds (VOC) – Removal of VOC Exemptions for California's Aerosol Coating Products Reactivity-Based Regulation; Proposed Rule*, 70 Fed. Reg. 1,640, 1,648 (Jan. 7, 2005) (proposed rule) ("The CARB reported that one company intended to comply with stricter CARB VOC mass-based limits by using less total VOC, but also by increasing the amount of much more reactive VOCs to compensate for solvency needs in the product. The CARB also reported that another large company indicated that its compliance strategy with more stringent VOC mass limits would be to increase the aromatic content (increasing reactivity) in its products. In these instances, CARB points out that the increased reactivity of the VOC emissions likely reduces the benefits of the lower mass of VOC emissions.).

<sup>8</sup> *Revisions to the California State Implementation Plan and Revision to the Definition of Volatile Organic Compounds (VOC) – Removal of VOC Exemptions for California's Aerosol Coating Products Reactivity-based Regulation*, 70 Fed. Reg. 53,930, 53,931 (Sept. 13, 2005) (final rule) ("The CARB hopes to target VOC emissions reductions to better control a product's contribution to ozone formation by encouraging reductions of higher reactivity VOCs, rather than by treating all VOCs in a product alike through a mass-based rule.")

<sup>9</sup> *Interim Guidance on Control of Volatile Organic Compounds in Ozone State Implementation Plans*, 70 Fed. Reg. 54,046, at 54,046 (Sept. 13, 2005) ("[EPA] encourages States to consider recent scientific information on the photochemical reactivity of [VOCs]. . . .")

<sup>10</sup> *National Volatile Organic Compound Emission Standards for Aerosol Coatings*, 74 Fed. Reg. 14,941 (Apr. 2, 2009) (proposed rule); *National Volatile Organic Compound Emission Standards for Aerosol Coatings*, 73 Fed. Reg. 15,604, 15,606 (Mar. 24, 2008) (final rule) ("It is generally understood that not all VOC are equal in their effects on ground-level ozone formation. Some VOC react extremely slowly and changes in their emissions have limited effects on ozone pollution episodes. Some VOC form ozone more quickly than other VOC, or they may form more ozone than other VOC. Other VOC not only form ozone themselves, but also act as catalysts and enhance ozone formation from other VOC.").



Despite the growing trend toward reactivity-based standards, SIG is aware that a select group of other stakeholders has raised concerns about the appropriateness of regulating based on reactivity. First, some raise the issue of “toxicity.” The argument is that reactivity-based standards would result in the formulation of products that are more “toxic” than conventional products. This argument is ambiguous and misplaced.

As an initial matter, it is not clear in this context what is meant by “toxicity.” Is the concern exposure to the general public through ambient concentrations? Or is the concern acute exposure to workers or consumers? Toxicity of particular compounds, by itself, provides little information about actual risk. If anything, the discussion should be about risk, which is a measure of toxicity, dose, and duration of exposure. If the concern is workplace safety for product formulators, federal and state workplace safety regulations would govern. If the argument is point of use exposure, consumers are given clear instructions for minimizing exposures through proper handling and application techniques. If the argument is ambient air exposure, there is simply no credible evidence that suggests that releases from Thinners and Solvents create toxic conditions in the ambient environment. Moreover, to the extent that CARB is concerned with exposure to certain chlorinated compounds, then it could adopt a reactivity-based approach that also restricts substances of concern.

Another concern some have raised is that reactivity-based regulations will increase ambient PM<sub>2.5</sub> concentrations and Secondary Organic Aerosol (“SOA”) yields. SIG is unaware of any data supporting that proposition. To the contrary, recent data published by the South Coast Air Quality Management District contradicts this assertion. Specifically, a recent CE-CERT study cited by the South Coast concluded that the PM formation potential of several common VOC compounds are similar to and in several cases lower than the “base case.”<sup>11</sup> These results shed significant doubt on the assertion that reactivity-based rules will increase secondary PM.

Finally, CARB has raised questions about the enforceability of reactivity-based standards, citing technical and cost concerns associated with sampling product off the shelf and determining compliance with established limits. As a practical matter, any regulation, whether mass or reactivity-based, will require formulators and manufacturers to comply with the law or face significant civil or criminal penalties (like virtually every other environmental regulatory scheme in the United States). To avoid an otherwise viable regulatory scheme based on the unfounded assumption that the regulated community will automatically try to cheat the system discredits the regulated community. In any event, it is obvious that several recordkeeping and certification/reporting mechanisms could be adopted to address this concern. For example, product formulators can be required to keep very specific product formulation and manufacturing data, and CARB can require submission of this data at any time. If, upon review of submitted data, CARB were to determine that actual product sampling is required, it could perform that testing on a much smaller subset of products of interest. In the alternative, we are willing to work with CARB to develop a third-party certification system that product formulators would have to obtain prior to putting product on the market. Third-party certification systems are widely used in other consumer product settings, and can easily be adapted to MPS and thinners if necessary. CARB would also have the authority to independently verify compliance through product specific testing similar to the current enforcement scheme for CARB’s aerosol rule.

---

<sup>11</sup> See SCAQMD draft Environmental Assessment for its proposed Rule 1143, *Consumer Paint Thinners and Multi-Purpose Solvents*, at table 2-5.



#### **IV. Specific Comments.**

##### **A. CARB Must Evaluate a Reactivity-Based Option**

CARB has long recognized that reactivity-based methodologies provide a reasonable alternative to conventional mass-based approaches. Indeed, in its 2007 comprehensive strategy (the “Strategy”) for obtaining the federal 8-hour ozone standard, CARB acknowledges that:

the ability to achieve significant reduction from mass-based standards is waning, so staff will likely be shifting the focus to other potential emission reduction opportunities. One such measure would include investigating emission reduction opportunities through reactivity-based standards in most categories. A reactivity-based approach relies on the scientific principle that different chemical compounds form different amounts of ozone in the atmosphere, rather than the mass-based approach that reduces ozone formation by reducing all reactive organic gases. . . . In the future, it is likely that further emission reductions from the consumer products source category will not be feasible using conventional approaches.<sup>12</sup>

In light of this recognition, pursuant to Government Code section 11346.2, CARB has an obligation to consider and evaluate a reactivity-based alternative to its current proposal. To date, CARB has only considered four alternatives: (1) no action, (2) different limits, (3) the setting of different effective dates, and (4) different limits for different categories.<sup>13</sup> This analysis is legally insufficient. By failing to evaluate reactivity, CARB has ignored by far the most reasonable alternative, one it has adopted for aerosol coating products. If CARB is going to reject reactivity, it has an obligation to provide its formal explanation for such a decision.

SIG urges CARB to adhere to its own comprehensive Strategy and to shift its focus to a more progressive reactivity approach.

##### **B. CARB’s Proposed Aromatics Prohibition is Arbitrary and Capricious**

CARB’s proposed amendments would, effective December 31, 2010, prohibit any person from selling, supplying, offering for sale, or manufacturing for use in California any MPS or thinner that contains greater than 1 percent aromatic compounds by weight. *See* proposed § 94509(u)(1)(c). The purpose of this provision is to prohibit formulators from replacing current VOC solvents used in MPS and thinners with “highly reactive” aromatics and hence negate the reductions anticipated by the tier 1 standards.

This aromatic prohibition is essentially a reactivity-based provision grafted onto a conventional mass-based approach. SIG opposes this prohibition on several grounds. First, if CARB is going to rely on reactivity-based concepts, then it ought to adopt the concept in its entirety. CARB selective use of reactivity unfairly serves only to make the mass-based approach more onerous and denies formulators any of the benefits of relative reactivity. Second, at the very least, if CARB is going to rely on reactivity to prohibit the use of aromatics, it should also allow reactivity to serve as the basis for an alternate control plan. As currently drafted, a consumer product could only be eligible for an innovative products exemption if the manufacturer “demonstrates by clear and convincing evidence that . . . use of the product will result in less VOC emissions.” Proposed § 94511(a). Thus, a product that emits more VOC

---

<sup>12</sup> Strategy at 129.

<sup>13</sup> Proposed Amendments to the California Consumer Products Regulation, Initial Statement of Reason Technical Support Document page 12.



emissions than a representative product could not be eligible for an exception even if clear and convincing evidence demonstrates that its actual ozone-forming potential is lower. Such an outcome is unjustified in the face of CARB's use of reactivity to ban the use of aromatics. It must also be noted that CARB uses reactivity to exempt low reactive compounds in this proposal.

Finally, CARB has not adequately explained and justified the need for and scope of the aromatics prohibition. First, CARB has not explained why it proposes to limit the prohibition to aromatics. CARB offers several examples of why prohibiting formulators from using xylenes and toluene, which have MIR values of 7.37 and 3.97 g O<sub>3</sub>/g VOC, respectively, would ensure that reformulated products would not result in greater ozone generation.<sup>14</sup> While this may be true, it does not explain why the prohibition is limited to aromatics. Many other compounds have MIR values that exceed xylene and toluene, yet they would not be subject to the rule's use prohibition. It would be arbitrary and capricious for CARB to adopt, without adequate explanation, a ban on the use of certain higher reactive compounds (*i.e.*, aromatics) yet allow other compounds with equivalent or higher MIRs to be used freely.

In addition, in the absence of regulating based on reactivity, a formulator could choose to use 3% of any non-exempt VOC species, which could have an MIR up to about 20. A blend that is 97% acetone and 3% of a 20 MIR species would have a weighted MIR value of approximately 1.0. In effect, CARB has unintentionally set an upper reactivity limit of about 1.0 g ozone per gram of product, potentially limiting the total emission reduction to about 53% not 98.5% ozone reduction as claimed. The arbitrary 1% limit placed solely upon aromatic compounds does little or nothing to mitigate this.

Nor has CARB provided any justification for the specific aromatic limit of one percent. How did CARB arrive at that number? What would be the implications of a prohibition set at some higher percentage, such as 2 or 5 percent? SIG requests that CARB provide this analysis and allow stakeholders to comment on it before finalizing the prohibition.

### **C. CARB Has Not Demonstrated that Its Proposed Regulations are Commercially and Technologically Feasible**

CARB has proposed to establish a two tiered approach to regulating MPS and thinners. Tier 1 would become effective on December 31, 2010 and limit VOCs to 30 percent by weight. The tier 2 standard would take effect on December 31, 2013 and limit VOCs to 3 percent. California Health and Safety Code § 41712 provides that before CARB may adopt regulations to control VOCs in consumer products, it must first determine that such standards are (1) commercially and technologically feasible and necessary; and (2) necessary to attain state and federal ambient air quality standards. CARB has not met its burden here, particularly with respect to its proposed tier 2 standards.

First, SIG objects to CARB's failure to make available the complete results of its 2008 MPS/Thinners survey update. The absence of this information has prevented SIG and other stakeholders from assessing fully the feasibility and merit of CARB's proposal. The limited data released in March 2009 included in the proposed amendments to the consumer products regulation initial statement of reason technical support document simply does not provide enough detail for a meaningful evaluation. Thus, we respectfully request that CARB make the comprehensive results of its 2008 survey available and allow stakeholders sufficient time to evaluate the data and comment before making any final decisions on the proposal.

---

<sup>14</sup> Proposed Amendments to the California Consumer Products Regulation, Initial Statement of Reason Technical Support Document page 101.



CARB staff itself makes the case that the tier 2 standards are not commercially and technologically feasible. For example, CARB staff state in the TSD that, “For the second tier limit, we believe it has not been demonstrated that products meeting the 3 percent VOC limit will function as paint thinners for all solvent-borne coatings available in commerce. While we are encouraged about the future viability of low VOC thinners, such as soy based products, it has not yet been demonstrated that they are ready for introduction into the market.”<sup>15</sup> CARB staff elsewhere state that the “overwhelming majority of existing products that meet the 3 percent VOC limit are formulated with pure acetone. We believe that the 3 percent VOC limit is challenging because products formulated with pure acetone have not been demonstrated to adequately thin all types of coatings.”<sup>16</sup> To account for this feasibility concern, CARB staff has proposed to undertake a technology assessment in 2012 “to evaluate manufacturer’s progress toward meeting the 3 percent limit.” *Id.*

This on its face shows that CARB has not met its burden. Until CARB can conclusively demonstrate that its tier 2 standard is feasible for thinners, it simply cannot, as a matter of law, adopt the standard—at least as it applies specifically to thinners. SIG recommends that CARB table further consideration of its Tier 2 standards until it can complete its technology assessment in 2012.

CARB has not sufficiently demonstrated that its tier 1 standard is feasible for both MPS and thinners. CARB bases its conclusion that the tier 1 standards are feasible on the results of its 2008 MPS/Thinners survey. In particular, CARB staff assert that “18 products, representing approximately 11.3 percent of the total Thinners and Solvent market on a sales basis, currently comply with the proposed 30 percent VOC limit. . . . We believe that this demonstrates that the first tier VOC limit of 30 percent by weight can be met using existing technology.”<sup>17</sup>

However, of the 18 products that currently meet the 30 percent limit, 15 of them also meet the 3 percent limit. *Id.* This in turn means that the “overwhelming majority” of these products are formulated with pure acetone—a formulation that according to CARB has “not been demonstrated to adequately thin all types of coatings.”<sup>18</sup> In other words, most of the existing products meeting the 30 percent limit are the very same acetone products for which CARB has raised efficacy concerns as it relates to the 3 percent limit. Thus, the same feasibility concerns exist for tier 1. Since CARB has not yet released the full results of the 2008 survey, SIG has no way of knowing the characteristics of the three remaining products and whether they have been demonstrated to adequately thin all types of coatings.

Nor has CARB demonstrated that its proposal is necessary to attain State and federal ambient air quality standards. As discussed above, since CARB has not evaluated a reactivity-based option, it cannot be said that this CARB proposal, *i.e.*, a mass-based approach, is “necessary” as that term is used in Health and Safety Code § 41712. That determination cannot be made until CARB completes its comprehensive analysis of all available options, including reactivity.

---

<sup>15</sup> Proposed Amendments to the California Consumer Products Regulation, Initial Statement of Reason Executive summary ES-7.

<sup>16</sup> SIG shares CARB’s efficacy concerns. Recent studies show, for example, that acetone may not be suitable as a lacquer thinner and may cause “cobwebbing” and “humidity blushing” due to its rapid evaporation rate. Cobwebbing occurs during a spray application when too much of the solvent evaporates. Humidity blushing can occur after any application method, and results from the evaporative cooling effect of the rapidly evaporating solvent. SIG reiterates that CARB should not promulgate its proposal, particular the tier 2 standard, until it has confirmed that ultra-low VOC products are compatible with their intended uses.

<sup>17</sup> Proposed Amendments to the California Consumer Products Regulation, Initial Statement of Reason Technical Support Document page 61.

<sup>18</sup> Proposed Amendments to the California Consumer Products Regulation, Initial Statement of Reason Technical Support Document page 62.



#### **D. CARB's Tier 2 Standard Could Raise Public Safety Concerns**

SIG shares CARB's concern that an ultra-low, mass-based VOC standard raises public safety concerns resulting from the increased fire hazards of reformulated MPS/thinner products. Although SIG supports CARB's proposed labeling requirements and enhanced public education generally, CARB has not sufficiently explained how these measures would meaningfully mitigate the increased fire risks that would result from the rule as proposed. SIG believes that this is yet another reason why CARB should delay finalizing its proposed tier 2 standard. CARB should not make any final determinations on its tier 2 limits until it completes its proposed technology assessment in 2012. The risks to public safety are too great to proceed without this needed assessment.

In light of CARB's acknowledgement that its ultra-low tier 2 standard could result in increased fire hazards for consumers and the public at large,<sup>19</sup> SIG questions how CARB staff could simultaneously conclude that "No significant adverse impacts were identified" with the proposal<sup>20</sup>. SIG requests that CARB reassess its preliminary conclusion on this issue.

#### **E. Global Warming**

CARB staff also proposes to limit the Global Warming Potential of MPS and thinners to no more than 150. But inasmuch as CARB proposes such a limit as part of its regulatory efforts to reduce the ozone-forming potential of consumer products, it has an obligation to demonstrate that its proposed GWP limit is commercially and technologically feasible. CARB has done no such analysis here. Nor are we aware of an analysis of the projected actual climate benefits of the rule, which would allow for a cost-benefit assessment.

SIG respectfully requests that before finalizing its GWP proposal CARB provide record support to demonstrate that the limit is indeed feasible and will not eliminate a product form.

#### **V. Conclusion**

SIG urges ARB to suspend consideration of their Consumer Products amendments at its September 24, 2009 Board meeting in its current form. To be clear, we are not against the regulation of multipurpose solvents and paint thinners. On the contrary, SIG supports reasonable regulation aimed at securing reductions of ground-level ozone in our urban environments. SIG is, however, against ill-conceived regulation that places a heavy burden on industry, reduces product performance, and raises safety concerns, the effectiveness of which is uncertain at best.

---

<sup>19</sup> Proposed Amendments to the California Consumer Products Regulation, Initial Statement of Reason Executive Summary-17.

<sup>20</sup> Proposed Amendments to the California Consumer Products Regulation, Initial Statement of Reason Executive Summary-16.



As always, SIG appreciates the opportunity to work with CARB on regulations that may impact the solvent industry. SIG is also appending to these comments a white paper further explaining the role of reactivity as part of effective ozone control strategies for your consideration. We remain committed to working with the Board on the development and implementation of reactivity-based standards in California, and look forward to continued dialogue in this area. Thank you for considering these comments. If you have any questions, please contact me at (703) 741-5612 or Leslie\_Berry@americanchemistry.com.

Sincerely,



Leslie Berry  
Solvents Industry Group Manager  
Chemical Products and Technology Division

cc: Robert Fletcher, P.E., Division Chief, Stationary Source Division  
Janette Brooks, Chief, Air Quality Measures Branch, Stationary Source Division  
Carla Takemoto, Manager, Technical Evaluation Section, Stationary Source Division  
Judy Yee, Manager, Implementation Section, Stationary Source Division  
Trish Johnson, Air Quality Measures Staff Lead, 2009 Regulatory amendments

Attachment

