State of California
AIR RESOURCES BOARD

Final Statement of Reasons for Rulemaking
Including Summary of Public Comments and Agency Responses

THE ADOPTION OF PROPOSED AMENDMENTS TO THE
CALIFORNIA CONSUMER PRODUCTS REGULATIONS

Public Hearing Date: September 24, 2009
Agenda Item No.: 09-8-4

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PUBLIC HEARING TO CONSIDER ADOPTION OF PROPOSED AMENDMENTS TO THE CALIFORNIA CONSUMER PRODUCTS REGULATIONS

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I. GENERAL

In this rulemaking, the Air Resources Board (ARB or the Board) has adopted amendments to the California Consumer Products Regulation that are primarily designed to reduce volatile organic compound (VOC) emissions. The regulation is codified in sections 94507-94517, title 17, California Code of Regulations (CCR). The Board has also adopted amendments to Method 310, "Determination of Volatile Organic Compounds (VOC) in Consumer Products and Reactive Organic Compounds in Aerosol Coating Products."

On August 7, 2009, ARB issued a notice of public hearing to consider the proposed amendments at the Board's September 24, 2009 hearing. An "Initial Statement of Reasons" (Staff Report or ISOR) was also made available for public review and comment starting August 7, 2009. The Staff Report, which is incorporated by reference herein, described the rationale for the proposal. The originally proposed text of the amended regulation and Method 310 was included as Appendix B to the Staff Report. These documents were also posted on ARB's internet site for this rulemaking at http://www.arb.ca.gov/regact/2009/cpmthd310/cpmthd310.htm.

On September 24, 2009, the Board conducted a public hearing to consider staff's proposal for adoption. Written and oral comments were received at the hearing. At the conclusion of the hearing, the Board adopted Resolution 09-51, which initiated steps toward final adoption of the proposed amendments. The approved amendments included modifications to the originally proposed language. These modifications had been suggested by staff in response to public comments made after issuance of the original proposal. The text or narrative description of each modification was contained in a six page document entitled, "Public Hearing to Consider Adoption of Proposed Amendments to the Consumer Products Regulations – Staff's Suggested Modifications to the Original Proposal," which was distributed at the beginning of the hearing and included as Attachment B to the Resolution.

Resolution 09-51 directed the Executive Officer to adopt the modified regulations after making the modified regulatory language available for public comment for a period of at least 15 days, in accordance with Government Code section 11346.8(c), and to make such additional modifications as may be appropriate in light of the comments received.

A "Notice of Public Availability of Modified Text" together with a copy of the full text of the regulation modifications, with the modifications clearly indicated, were distributed on January 14, 2010, to each of the individuals described in subsections (a)(1) through (a)(4) of section 44, title 1, CCR. By this action, the modified Consumer Products Regulation was made available to the public for a 15-day comment period

from January 14, 2010, to January 29, 2010, pursuant to Government Code section 11346.8.

A "Second Notice of Public Availability of Modified Text" together with a copy of the full text of the regulation modifications, with the modifications clearly indicated, were distributed on June 28, 2010, to each of the individuals described in subsections (a)(1) through (a)(4) of section 44, title 1, CCR. By this action, the modified Consumer Products Regulation was made available to the public for a 15-day comment period from June 28, 2010, to July 13, 2010, pursuant to Government Code section 11346.8. The Executive Officer then determined that no additional changes should be made to the regulations, and subsequently issued an Executive Order, by which the modifications to the Consumer Products Regulation and Method 310 were adopted.

This Final Statement of Reasons (FSOR) updates the Staff Report by identifying and providing the rationale for the modifications made to the originally proposed amendments. The FSOR also contains a summary of the comments received on the proposed amendments during the formal regulatory process and ARB's responses to those comments. Modifications to the original proposal are described in Section II of this FSOR entitled "Modifications Made to the Original Proposal."

In Section 94508(a)(14), the definition of "Artist's Solvent/Thinner" incorporates by reference ASTM Standard D4236 – 95 Standard Practice for Labeling Art Materials for Chronic Health Hazards, as one criteria that must be met for a consumer product to qualify as an "Artist's Solvent/Thinner." Additionally, in this rulemaking action, references to ASTM standards that are already listed in the existing regulation were clarified by adding the title and publication date of each ASTM standard. All of these documents are referenced and incorporated into the CCR because it would be cumbersome, unduly expensive, and otherwise impractical to publish them in the CCR. ARB administrative practice has long been to have specifications, test procedures, and similar documents incorporated by reference rather than printed in the CCR because these specifications and procedures are highly technical and complex. Because ARB has never printed complete test procedures and similar documents in the CCR, the directly affected public is accustomed to the incorporation format used in the regulation. These test procedures and similar documents as a whole are extensive, and it would be both cumbersome and expensive to print these lengthy, technically complex procedures in the CCR for a limited audience. For similar reasons, it has been a longstanding and accepted practice of ARB to incorporate ASTM International standards and test methods into the CCR by reference. Among other things, this enables interested parties to verify the standards or practices have been adopted by a consensus-driven, authoritative source.

As defined in Government Code section 11345.5(a)(6), the Board has determined that this regulatory action will not create costs or savings to any State agency, nor affect federal funding to the State. The Board has also determined that this regulatory action will not create costs or impose a mandate upon any local agency or school district, whether or not it is reimbursable by the State pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code; or affect other non-discretionary savings to state or local agencies. In preparing the regulatory proposal, the ARB staff considered the potential economic impacts on California business enterprises and individuals. A detailed discussion of these impacts is included in the ISOR. The adopted regulations are considered "major regulations" within the meaning of Health and Safety Code section 57005 (enacted

by Senate Bill 1082: Stats.1993, ch. 418), because the regulations will have an economic impact on the State's business enterprises in an amount of approximately $3.1 million dollars per year for ten years. During the 45-day and 15-day comment periods, no alternatives or combination of alternatives were submitted to the ARB which would be equally effective as the proposed regulations (i.e., no alternatives, or combination of alternatives, were submitted which would achieve at least the equivalent level of environmental protection within the same time frame as the proposed regulations.)

The Board has further determined that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons than the action taken by the Board.

II. MODIFICATIONS MADE TO THE ORIGINAL PROPOSAL

Various modifications to the original proposal were made in order to address comments received during the 45-day public comment period, and to clarify the regulatory language. These modifications are described below.

A. Section 94508. Definitions.

1. In Section 94508(a)(13), the definition of "Aromatic Compound" was modified to further clarify the specific compounds subject to the 1 percent by weight aromatic compound content limit.
2. In Section 94508(a)(87), the definition of "Industrial Maintenance Coating" was modified to include additional language which may be on product labels.
3. In Section 94508(a)(106), the definition of "Multi-purpose Solvent" was modified to include the definition of "Paint Clean-up" to clarify that such products are included in the "Multi-purpose Solvent" category, not excluded.
4. In Section 94508(a)(114), the definition of "Paint Clean-up" was removed as a separate definition in section 94508 and instead placed within the definition of "Multi-purpose Solvent."
5. In Section 94508(a)(115), the definition of "Paint Thinner" was modified to further clarify the criteria that must be met in order for the product to be excluded from the definition of "Paint Thinner."
6. In Section 94508(a)(163), the definition of "Zinc-Rich Primer" was modified to include additional language which may be on product labels.

B. Section 94509. Standards for Consumer Products.

In Section 94509(u), several minor modifications were made to make the proposed new regulatory language consistent with existing regulatory language.

C. Section 94512. Administrative Requirements.

1. The originally proposed VOC labeling requirement for Multi-purpose Solvent and Paint Thinner products was deleted as a result of concerns that the requirement conflicted with existing requirements of the local air districts.
2. A modification was made allowing manufacturers to have the option to also display the proposed language for the labeling of flammable or extremely flammable Multi-purpose Solvents and Paint Thinners in a contrasting square or rectangle on the product label.
3. Modifications were also made to the proposed language for the labeling of flammable or extremely flammable Multi-purpose Solvents and Paint Thinners, specifying font size and a requirement that the statements be expressed in Spanish as well as English.

D. Section 94515. Test Methods.

1. Section 94515(c) was added to clarify the compliance testing procedures for the aromatic compound content limit and what constitutes a violation.
2. Section 94515(h) was removed.

III. SUMMARY OF COMMENTS MADE DURING THE 45-DAY COMMENT PERIOD AND AGENCY RESPONSES

The Board received written and oral comments during the 45-day comment period for this regulatory action. A list of commenters is shown below, along with an abbreviation for each commenter. Following the list, staff has summarized each comment provided regarding the proposal with an explanation of how the proposed action has been changed to accommodate the comment, or the reasons for making no change.

A. List of Commenters

The table below identifies the comments received during the 45-day comment period that presented an objection or recommendation specifically directed towards the regulation or the procedures followed. The table provides a correlation between (1) the abbreviation used in this Section III to refer to a comment letter or testimony; and (2) the name of the person(s) signing the comment letter or presenting the testimony. Written submittals were received between August 7, 2009, and September 23, 2009. Oral testimony was presented at the September 24, 2009 hearing.

Comment Abbreviation	Commenter
ACCSIG1	Leslie Berry, American Chemistry Council Solvents Industry Group Written testimony: September 22, 2009
ACCSIG2	Chet Thompson, American Chemistry Council Solvents Industry Group Oral and written testimony: September 24, 2009
ACCSIG3	Dave Laucella, Shell Chemical on behalf of American Chemistry Council Solvents Industry Group Oral testimony: September 24, 2009
CCA1	Luis R. Cabrales, Coalition for Clean Air; James J. Provenzano, C.Ph, Clean Air Now; Mike Garcia, SEIU-USWW; Eveline Shen, Asian Communities for Reproductive Justice; Pamela King Palitz, Environment California; Lenny Siegel, Center for Public Environmental Oversight; Wafaa Aborashed, Bay Area Healthy 880 Communities-SL; Adrian Martinez, Natural Resources Defense Council; Bonnie Holmes-Gen, American Lung Association in California; Mara Burstein, Environment Now; Bill Magavern, Sierra Club California; Marylia Kelley, Tri-Valley CAREs; Erin Switalski, Women's Voices for the Earth; Anne Kelsey-Lamb, Regional Asthma Management and Prevention and Community Action to Fight Asthma; Deborah Moore, Green Schools Initiative; Jim Stewart, PhD, Sierra Club Angeles Chapter Global Warming, Energy & Air Quality Committee; Raul Anorve, Instituto De Educación Popular Del Sur De California; Bahram Fazeli, Communities for a Better Environment; Julia Liou, California Healthy Nail Salon Collaborative; Judi.Shils, Teens Turning Green Written testimony: September 23, 2009
CCA2	Luis Cabrales, Coalition for Clean Air Oral testimony: September 24, 2009
CCA3	Sheila Nem, Coalition for Clean Air Oral testimony: September 24, 2009
CSPA1	Joseph Yost, Consumer Specialty Products Association Written testimony: September 21, 2009
CSPA2	Joseph Yost, Consumer Specialty Products Association

	Oral testimony: September 24, 2009
CSPA3	D. Douglas Fratz, Consumer Specialty Products Association Oral testimony: September 24, 2009
FORMLETTER	Dency Nelson **179 additional commenters submitted same comments** Written testimony: September 21, 2009
IRTA	Katy Wolf, Institute for Research and Technical Assistance Oral testimony: September 24, 2009
LBACA1	Elena Rodriquez, Long Beach Alliance for Children with Asthma Oral testimony: September 24, 2009
LBACA2	Yolanda Chavez, Long Beach Alliance for Children with Asthma Oral testimony: September 24, 2009
LBACA3	Maria Yolanda Lopez, Long Beach Alliance for Children with Asthma Oral testimony: September 24, 2009
LBACA4	Martha Cota, Long Beach Alliance for Children with Asthma Oral testimony: September 24, 2009
NAA1	Doug Raymond, The National Aerosol Association Written testimony: September 22, 2009
NPCA1	James Sell, National Paint and Coatings Association (NPCA/SCCT) Written testimony: September 14, 2009
NPCA2	David Darling, National Paint and Coatings Association (NPCA/FSCT) Written testimony: September 21, 2009
NPCA3	David Darling, National Paint and Coatings Association Oral testimony: September 24, 2009
NPCA4	Heidi McAuliffe, National Paint and Coatings Association (SPMC/CSA) Written testimony: September 24, 2009
NRDC	Morgan Wyenn, Natural Resources Defense Council Oral testimony: September 24, 2009
OPPL	Reinhard Oppl (No Affiliation Given) Written testimony: August 17, 2009
RB	Eileen Moyer, Reckitt Benckiser Oral testimony: September 24, 2009
SANDOVAL	Heriberta Sandoval (No Affiliation Given) Written testimony: September 23, 2009
SCAQMD1	Barry Wallerstein, South Coast Air Quality Management District Written testimony: September 24, 2009
SCAQMD2	Naveen Berry, South Coast Air Quality Management District Oral testimony: September 24, 2009
SMAQMD	Larry Greene, Sacramento Metropolitan Air Quality Management District Written testimony: September 22, 2009
SCFPO1	Steve Bunting, Southern California Fire Prevention Officers Written testimony: August 17, 2009
SCFPO2	Steve Bunting, Southern California Fire Prevention Officers Oral testimony: September 24, 2009
SCJ	F. H. Brewer, S. C. Johnson & Son, Inc. Written testimony: September 21, 2009
SIERRACLB	Jim Stewart, Sierra Club Oral testimony: September 24, 2009
SW1	Gregory Johnson, Sherwin-Williams Diversified Brands Written testimony: September 15, 2009
SW2	Gregory Johnson, Sherwin-Williams Diversified Brands Oral testimony: September 24, 2009
TENNANT	Daniel Tennant, (No Affiliation Given)

	Written testimony: September 22, 2009
WMB1	Doug Raymond, WM Barr and Company, Inc. Written testimony: September 22, 2009
WMB2	Doug Raymond, WM Barr and Company, Inc. Oral testimony: September 24, 2009

B. General Comments

B-1. **Comment:** SMAQMD commends and supports the efforts to develop this regulation which will provide the needed emissions reductions committed to in the recently adopted State Implementation Plan for the Sacramento region. [SMAQMD]

B-2. **Comment:** We applaud your agency's efforts to reduce emissions of volatile organic compounds (VOCs) from consumer products and commend your staff for listening to CARB board members' orders to help protect the health of California residents, consumers and workers. [CCA1; SANDOVAL]

B-3. **Comment:** CSPA supports the proposed clarifications affecting the Automotive Windshield Washer Fluid category. [CSPA1]

Response to Comments B-1 through B-3: Comments noted. The Board approved staff's proposal with the suggested modifications.

B-4. **Comment:** SIG supports CARB's goal of continued improvements in air quality through effective and efficient regulation of VOCs in consumer products, and we stand ready to help. We also commend CARB staff. They are true professionals and have been a pleasure to work with. [ACCSIG2]

Response: Comment noted.

B-5. **Comment:** We are very supportive of staff's efforts to look at global warming emissions from consumer products. Prohibiting chemical compounds with high Global Warming Potential (GWP) value is a great start. [CCA1]

Response: Comment noted.

B-6. **Comment:** The elimination of emissions of consumer products, that strikes at what every person in this state uses and sells. I don't know what this is aimed at, but I see the price of every product in this state going up, while the wind blows China's pollution to our shore. [TENNANT]

Response: While this comment is not directed at the proposed amendments, VOC emissions reductions from consumer products are needed to attain the ambient air quality standards for ozone. The commenter should consult Chapter IV, Emissions, of the Staff Report.

B-7. **Comment:** Janitors like me, are waiting for a strong regulation of janitorial products and hope you will remind your staff they need to include them in the 2010 Consumer Products regulation. The regulation of janitorial products is a very important protection in our work. [SANDOVAL]

B-8. **Comment:** Janitors are waiting for a strong regulation of janitorial product and would like to remind your staff they need to include them in the 2010 consumer products regulation. [CCA3]

Response to Comments B-7 and B-8: Comments noted. Recently, staff proposed lower VOC limits for four cleaning product categories. The proposed amendments to the consumer products regulation are scheduled to be considered by the Board at its November 18-19, 2010, hearing.

C. Double Phase Aerosol Air Freshener Comments

C-1. **Comment:** SC Johnson urges Board adoption of the staff recommendations for the Air Freshener category. SCJ supports the staff proposal because they provided an additional year, in their proposed effective date, for companies to research, develop, and implement reformulation options. [SCJ]

C-2. **Comment:** I'm here to support the proposal that the ARB staff has put forward. We believe that the limit is feasible. [RB]

C-3. **Comment:** CSPA member companies commit to reformulate Double Phase Aerosol Air Freshener products to meet the new VOC limit by December 31, 2012. [CSPA1]

Response to Comments C-1 through C-3: Comments noted. The Board approved staff's proposal with the suggested modifications.

C-4. **Comment:** CSPA respectfully requests the Board to direct staff to conduct another cost analysis applying more reasonable assumptions and better taking into account the information provided by manufacturers that substantiates the significant difficulties they will encounter in reformulating their Double Phase Aerosol Air Freshener products to meet the proposed VOC limit. [CSPA1]

Response: In a subsequent discussion with the commenter, it became clear that the commenter misinterpreted the total estimated costs of the regulation. In developing the estimated cost to comply with the proposed VOC limit for this category, staff assumed a project horizon of ten years and stated in Chapter VII of the Staff Report that the various Double Phase Aerosol Air Freshener costs shown are per year for ten years. The commenter indicated that the estimated cost of the regulation was a total $3.1 million, when this is the cost for one year and the overall cost of the regulation is actually $3.1 million per year for ten years, for a total of $31 million. Staff believes that the commenter now agrees that the cost analysis was conducted with reasonable assumptions, which yielded appropriate cost estimates.

C-5. **Comment:** Regarding restriction of Global Warming Potential for Double Phase Air Freshener aerosols, there is no non-flammable alternative to HFC-134a which would be the only compound that could be used as a propellant. There should be an exemption for this situation. [NAA1]

Response: Staff disagrees with the comment. Staff has not found or been made aware of any Double Phase Aerosol Air Fresheners containing HFC-134a currently being sold. Additionally, no non-flammable products were reported in the 2006 Consumer & Commercial Products Survey. Therefore, staff believes it is appropriate to prohibit the use of compounds with global warming potential values of 150 or greater, such as HFC-143a, to ensure there is no increase in greenhouse gas emissions from reformulated products.

C-6. **Comment:** The proposed limit for air fresheners presents very significant technological challenges for product manufacturers. We request ARB staff to work with us to re-evaluate this limit in the future if it proves to be technologically and commercially infeasible. [CSPA2]

Response: Staff recognizes that the proposed limit is challenging. Therefore we proposed an effective date of December 31, 2012, to allow manufacturers additional time to reformulate affected products. Additionally, Resolution 09-51 directs the Executive Officer to monitor the progress of manufacturers in meeting the limits. This directive is typical of previous consumer products regulatory proposals and commits staff to performing a technical assessment prior to the December 31, 2012, effective date.

D. Multi-purpose Solvent and Paint Thinner Comments

D-1. **Comment:** We applaud the California Air Resources Board's (CARB) efforts to reduce the emissions of volatile organic compounds (VOCs) from consumer products. CARB should continue to lead the way and set the precedent for protecting our environment and public health, in reducing harmful toxics in consumer and industrial products, specifically. The regulations on multipurpose solvents and paint thinners will reduce danger to health of children with asthma, and reduce risks of organ damage and cancer to workers using these products. [FORMLETTER]

D-2. **Comment:** The South Coast Air Quality Management District supports the proposal before you today and recognizes upon full implementation this proposed rule will significantly reduce VOC emissions throughout California. [SCAQMD1; SCAQMD2]

D-3. **Comment:** During the 2008 ARB hearing, the Board gave instructions to staff to regulate this category. We urge this Board to support your staff. [LBACA3]

D-4. **Comment:** We're asking CARB to adopt regulations that are more strict so that we can feel that we are being protected with your work. Also, we're 100 percent in support of ARB's staff proposal to ban all those toxic chemicals in solvents and paint thinners. We hope you will show your leadership in favor of our communities impacted by air pollution and toxic chemicals in consumer products. [LBACA4; SANDOVAL]

D-5. **Comment:** We also want to express our strong support to the proposed new subsection 94509(u), which would prohibit perchloroethylene, methylene chloride, and trichloroethylene on multi-purpose solvents and paint thinners. [CCA1]

Response to Comments D-1 through D-5: Comments noted.

D-6. **Comment:** We're asking CARB to adopt staff's proposal to reduce the percentage of emissions of VOCs in paint thinners and multi-purpose solvents down to three percent. We urge CARB to change the timeline and move it to 2012, closer to rule 1143, shortening the deadline for these emissions. [LBACA1; SANDOVAL]

D-7. **Comment:** All of our comments are obviously in support of this regulation. And, in fact, we would like to see it strengthened by moving the deadline for solvents from 2013 to 2012 and make it closer to AQMD's rule 1143. We completely disagree that these regulations will end this industry as we know it. [CCA2]

D-8. **Comment:** She would like to strongly encourage you to support your staff by setting the VOC limit to three percent and asks you to move implementation date for multi-purpose solvents to 2012. [CCA3]

D-9. **Comment:** Let's make sure we're including the knowledge of the South Coast Air Quality Management District. Let's move up the 2013 deadline by the end of 2012. [SIERRACLB]

D-10. **Comment:** We are very hopeful about the estimated reductions from this regulation, but are concerned about the disparity with the SCAQMD's Rule 1143 implementation dates. We strongly encourage CARB to align the VOC limit implementation date for multipurpose solvents closer to Rule 1143, setting 2012 as the implementation timeline. We believe that by aligning the effective date for multi-purpose solvents closer to that of Rule 1143, CARB will reduce the health impacts associated with the misuse of these products, and will achieve VOC reductions one year earlier. [CCA1]

D-11. **Comment:** We urge CARB to adopt these regulations to better protect the health of consumers and workers. We urge CARB to adopt a reduction in VOCs for multi-purpose solvents and paint thinners to three percent. However, CARB should align its VOC three percent limit date closer to the AQMD's Rule 1143 by shifting the 2013 implementation date to 2012. An implementation date of 2012 is more appropriate for this regulation. We encourage CARB to expand these efforts and to reduce the greenhouse gas emissions from other kinds of consumer products and ingredients contributing to global warming. We encourage CARB to make California the first state that officially reduces our global warming footprint from consumer products. [NRDC]

D-12. **Comment:** I'm here to request ARB to get the timeline closer to AQMD's to reduce VOCs from these solvents. [LBACA2]

D-13. **Comment:** I strongly support this regulation today, but hope you will move the effective date of the final VOC limit of three percent up earlier to be more consistent with the South Coast standard, which goes into effect in 2011. [IRTA]

D-14. **Comment:** We need to express a concern that the proposed implementation schedule is too lengthy for Southern California health needs. As you know, the SCAQMD has already adopted a similar regulation, Rule 1143, with tighter implementation dates for the interim and final limits of January 2010 and January 2011, respectively. [SCAQMD1]

Response to Comments D-6 through D-14: Comments noted. Staff believes the proposed effective date of December 31, 2013, is necessary because it has not been demonstrated that low VOC products available today in commerce adequately thin all types of coatings. The additional time is also needed to develop less flammable and/or less costly product technologies that may also provide greater ozone reductions.

D-15. **Comment:** ARB's proposed statewide regulatory limits are generally more stringent than the District Rule. In the Initial Statement of Reasons (ISOR) for this rule, ARB states that the ARB percent-VOC and SCAQMD weight-per-volume limits for thinners and solvents are "virtually equivalent" except for the CARB 30% limit being effective one year later and the 3% limit three years later than the respective South Coast limits. To be precise, however, the two limits are not "virtually equivalent," due

to the relatively low density (specific gravity) of acetone and other types of solvents used in these products. [CSPA1; NPCA2]

Response: Staff acknowledges that there are a number of solvents currently used in Multi-purpose Solvent and Paint Thinner products, and that these solvents span a range of densities. Depending on the solvent used in reformulated products, there is a potential that ARB's proposed VOC limit in percent by weight will differ from SCAQMD's VOC limit in grams per liter. Throughout the development of the proposed limits, we worked with SCAQMD staff to identify technologically and commercially feasible VOC limits from Multi-purpose Solvents and Paint Thinners. Additionally, on numerous occasions staff disclosed its intention to propose virtually equivalent limits given the historical differences between ARB's adoption of consumer products VOC limits in percent by weight and SCAQMD's adoption of VOC limits in grams per liter. Staff agrees with the commenter's contention that there is potential that the proposed statewide limits may differ slightly from SCAQMD's limits depending on the solvent used in the reformulated products. However, this is not a compliance issue for manufacturers because if the product meets the SCAQMD Rule 1143 requirements, it will meet the ARB limits. SCAQMD's first tier limit of 300 grams per liter (virtually equivalent to 30 percent VOC by weight) went into effect on January 1, 2010. ARB's first tier, 30 percent VOC limit, is effective on December 31, 2010, one day before SCAQMD's second tier limit of 25 grams per liter (equivalent to 3 percent VOC by weight) goes into effect.

D-16. Comment: ARB should use its authority to make the VOC limits for the Multi-purpose Solvent and Paint Thinner product categories supersede South Coast Air Quality Management District limits, or make the State limits apply only outside the District. In South Coast, there are four separate requirements that would need to be met within four years, the way the current regulation proposal is written (assuming acetone is a major component in reformulations). Differing requirements in different parts of the state (South Coast vs. rest of California) will be difficult to meet. [CSPA1; NPCA2]

Response: Under the circumstances involved here, ARB does not have the legal authority to supersede or preempt the limits adopted by the SCAQMD. The Governing Board of the SCAQMD adopted limits for multi-purpose solvent and paint thinners before ARB adopted limits for the same categories. This raises two questions: (1) does the SCAQMD have the authority to adopt VOC limits for categories of consumer products that ARB has not previously regulated, and (2) if the SCAQMD adopts VOC limits for a consumer product category before ARB has regulated this category, do these limits remain legally effective if ARB subsequently adopts VOC limits for the same category?

The ARB Office of Legal Affairs first considered these questions in 1992, and issued a legal opinion on December 3, 1992, which reached two conclusions. The first conclusion is that once ARB has adopted a VOC regulation for a particular category of consumer products, Health and Safety Code section 41712(e) prohibits local dir districts from subsequently adopting any VOC regulation that is different than the ARB regulation for that category; but until ARB formally adopts a regulation for a product category, districts retain their existing legal authority to adopt a regulation for this category. The second conclusion is that if a district adopts a regulation for a product category that has not been regulated by ARB, and then ARB subsequently adopts a regulation for this product category, the district regulation remains legally

effective and is not preempted by the subsequent ARB adoption. Following is a discussion of the reasoning ARB used to reach these conclusions.

Before 1988, ARB did not have the authority to regulate consumer products. Consumer products are nonvehicular sources, and the primary authority to regulate nonvehicular sources lay with the local air districts (see Health and Safety Code section 39002). In 1988, the Legislature enacted the California Clean Air Act of 1988 (the "Act"; Stats. 1988, Chapter 1568). The Act added a number of new provisions to the Health and Safety Code, including section 41712. Section 41712 requires ARB to adopt regulations to achieve the maximum feasible reduction in volatile organic compounds (VOCs) emitted by consumer products. Health and Safety Code section 41712(f) contains language limiting the authority of local air pollution control and air quality management districts (districts) to regulate consumer products. Section 41712(f) currently states:

> "(f) A district shall adopt no regulation pertaining to disinfectants, nor any regulation pertaining to a consumer product that is different than any regulation adopted by the state board for that purpose."

The language above is the result of several bills enacted by the Legislature. The original version of this language was included in the California Clean Air Act of 1998, and this language was amended in 1992 by AB 2783 (Sher, Stats. 1992, ch. 945). After the 1992 amendments the language read as follows:

> "(e) A district shall adopt no regulation relating to a consumer product that is different than any regulation adopted by the state board for that purpose."

The 1992 language was essentially the same as the current language, except that the current language prohibits any regulation of disinfectants by the districts. The language regarding disinfectants was added in 1997 (Stats. 1997, ch. 689) and is not relevant to this analysis; the critical question is how the language restricts districts from regulating other consumer product categories that are not disinfectants.

By its terms, section 41712(e) does not restrict district authority unless ARB has already adopted a regulation "for that purpose." The ARB Office of Legal Affairs has long taken the position that the qualifying phrases "... regulation relating to a consumer product ..." (e.g., not a regulation relating to consumer products in general) and "... for that purpose ..." indicate that the restriction on district action applies only to the regulation of those specific consumer product categories (e.g., hairsprays, glass cleaners, etc.) for which VOC standards have already been specified in an ARB regulation. The language does not restrict district authority to regulate a particular consumer product category unless it has already been regulated by the ARB. However, once ARB has adopted a VOC regulation for a particular category of consumer products, Health and Safety Code section 41712(e) prohibits local districts from subsequently adopting any VOC regulation that is different than the ARB regulation for that category.

So what happens if a district adopts a regulation for a product category that has not been regulated by ARB, and then ARB subsequently adopts a regulation for the same product category? The language of section 41712(e) does not specifically state that a previously adopted district regulation is automatically preempted by the subsequent ARB adoption of a different regulation. Section 41712(e) merely provides that " ... A district shall adopt no regulation ... " that is different from any ARB regulation. The Legislature did not state, as it could easily have done, that a

district " ... shall not adopt or enforce any regulation ... " that is different from an ARB regulation. The use of the term "enforce," or similar language, would have made it clear that previously adopted district regulations were preempted once the ARB acted to adopt its own regulation. For example, subsection (i) of Health and Safety Code section 41712 states that air pollution control standards for aerosol paints "… shall be set solely by the state board…" and that "A district shall not adopt or enforce any regulation…" that is different than an ARB aerosol paint regulation.

From the foregoing analysis, it is apparent that the language of section 41712(e) contains significant ambiguities. In an attempt to clarify these ambiguities, ARB lawyers reviewed the legislative history of both AB 2783 and the California Clean Air Act of 1988, which enacted the original version of Health and Safety Code section 41712. Unfortunately, there is nothing in the legislative history of either bill which is dispositive in answering the specific questions posed above. It is possible to surmise that section 41712(e) was intended to promote some kind of statewide uniformity in consumer product regulations. However, the unusual and ambiguous wording of the language makes it unclear as to exactly how preexisting district regulations should be treated. In light of the textual ambiguities and the lack of any useful guidance in the legislative history, the question is to what extent it is appropriate to conclude that the Legislature intended to repeal by implication the districts' longstanding authority (see Health and Safety Code section 39002 and 41508) to regulate consumer products as nonvehicular emission source categories.

The California Supreme Court addressed a similar question in the case of *Western Oil and Gas Association (WOGA) v. Monterey Bay Unified Air Pollution Control District*, 49 Cal.3d 408; 261 Cal. Rptr. 384 (Aug. 1989). In this case, the Court discussed the circumstances under which it may validly be concluded that a statute operates to preempt or repeal by implication the authority of local air districts to control nonvehicular sources. In discussing the applicable precedents the Court stated:

> "... All presumptions are against repeal by implication ... The presumption against implied repeal is so strong that 'To overcome the presumption the two acts must be irreconcilable, clearly repugnant, and so inconsistent that the two cannot have concurrent operation' … There must be no possibility of concurrent operation. Implied repeal should not be found unless the later provision gives undebatable evidence of an intent to supersede the earlier ..." 49 Cal.3d 408, 419-420.

Based on the principles set forth in the WOGA case and the reasoning discussed above, ARB concluded in 1992 that previously adopted district consumer product regulations are not preempted when ARB adopts a regulation for the same product category. We believe that both the reasoning and conclusion are still valid.

The commenters also suggest that instead of using ARB's authority to supersede the SCAQMD limits (which ARB cannot do for the reasons stated above), ARB might instead "…make the State limits apply only outside the District." ARB disagrees with the commenters and does not believe that this alternative will help the regulated community. Consumer products are widely distributed throughout the State through multiple distribution channels, and ARB's experience is that uniform statewide standards are preferable to region-specific standards. As the commenters themselves state: "Differing requirements in different parts of the state (South Coast vs. rest of California) will be difficult to meet." In this case the SCAQMD is acting within its authority to establish its own standards, in order to address its

commitments in the State Implementation Plan and the serious air pollution problems of the South Coast Air Quality Management District. There will be separate standards within the SCAQMD in any event, and the situation will not be improved if ARB limits its standards for these product categories to areas outside of the SCAQMD.

D-17. **Comment:** For products which include an attached "hang tag," we believe the hang tag or sticker shall be large enough to display the statement in Chinese, English, Korean, Spanish, and Vietnamese in a minimum size 14 font. We also believe the font color of the statement be in sharp visual contrast to the background color of the hang tag or sticker. Lastly, hang tags shall be attached by wire, plastic tie, self-adhesive, or threaded cap and not obscure any other warning messages printed on the container. [SCFPO1]

Response: Based on subsequent discussions with industry experts and fire officials, staff agreed that the flammable or extremely flammable labeling provision should contain a font size requirement and statements in both English and Spanish. Due to size limitations on product labels, hang tags, and stickers staff believes it is impractical to require warnings in all five languages recommended by the commenter. The modifications to section 94512(e) were proposed in the first 15-day public comment period. Additionally, prior to the effective date of the limits, staff intends to provide Multi-purpose Solvent and Paint Thinner flammable labeling information on ARB's Consumer Products Program website in English, Spanish, Chinese, Korean, and Vietnamese. The commenter supported staff's additional modifications as shown in Comment D-18, below.

D-18. **Comment:** We believe the modifications that staff has recommended for this regulation will reduce the hazard by letting people know they're not using a product that they've been used to using all along. [SCFPO2]

Response: Comment noted.

D-19. **Comment:** NPCA/FSCT is concerned the "tag" label statement is problematic in that they may compel manufacturers to provide "dual" Spanish language on the labels for the affected products. This would increase burden on the industry by forcing companies to redo their product labels, and discard existing labels. [NPCA2]

Response: Prior to the receipt to this comment, staff identified that a majority of Multi-purpose Solvent and Paint Thinner product labels contained all wording in both English and Spanish. Additionally, it was brought to staff's attention in Comment D-17, that the labeling provision statement would be more effective in additional languages. The Response to Comment D-17 is incorporated herein. Additionally, staff believes there are a number of non-flammable and non-extremely flammable formulations currently in commerce that can meet the first tier 30 percent VOC limit. However, we acknowledge that the second tier 3 percent VOC limit is technology forcing. Therefore, the Board adopted an effective date of December 31, 2013, for the second tier limit to allow manufacturers time to develop less flammable products. This long lead time should also provide the regulated industry an opportunity to plan ahead and minimize costs to change labels. Staff will also conduct a technical assessment in 2012 to evaluate manufacturers' progress in developing less flammable products. Nevertheless, based on comments received from stakeholders and fire officials, staff believes that it is necessary to alert the consumer of a potential change in reformulation and it is most effective to require the label statement in both

English and Spanish. It should also be noted that the labeling provision will sunset on December 31, 2015.

D-20. **Comment:** There will be an increased fire risk to consumers for the 3% VOC limit because manufacturers will be forced to use exempt compounds that are extremely flammable. [NAA1]

D-21. **Comment:** There will be a significant fire hazard as a result of forcing manufacturers to use acetone in reformulation of multipurpose solvents and paint thinners. Acetone bursts into flames around ignition sources at almost all ambient temperatures (flashpoint of 5 degrees F). Regular paint thinner has a flashpoint of 100 degrees F or higher, making it much less of a fire hazard. Fire department representatives and the CPSC have expressed their concerns over this rulemaking. [WMB1]

D-22. **Comment:** Our first concern is the fire risk to the consumer, especially from the future three percent limit. The three percent limit will force us to use acetone and what will happen is it will make the product an extremely flammable product which will increase the flammability risk to consumers. [WMB2]

D-23. **Comment:** We're concerned the proposal would likely result in the formulation of products that pose a higher fire risk to consumers. We do not believe the CARB staff has demonstrated how those provisions would alleviate the undoubted increase in safety risk. [ACCSIG2]

D-24. **Comment:** While CARB has attempted to mitigate the increased risk of fire hazards, we believe the risk still remains. [NPCA2; NPCA3]

D-25. **Comment:** The tier 2 standard could result in increased fire hazards for consumers and the public at large. CARB has not explained how it would abate this hazard. CARB should reassess its preliminary conclusion that "No significant adverse impacts were identified." [ACCSIG1]

Response to Comments D-20 through D-25: For persons who choose to sell, supply, offer for sale, or manufacture for use any flammable or extremely flammable Multi-purpose Solvent or Paint Thinner labeled as "Paint Thinner;" "Multi-purpose Solvent;" "Clean-up Solvent;" or "Paint Clean-up;" ARB agrees that it is necessary to alert consumers that the product has been reformulated and may have different characteristics than previous products. Therefore, the Board approved a labeling provision that requires manufacturers to alert the consumer of a potential change in formulation which could present a fire hazard if used improperly. In developing this regulatory provision, ARB staff worked with a California Fire Department Chief, representing a broad coalition of California fire officials. The Fire Chief testified before the Board and stated that "…the modifications that staff has recommended for this regulation will reduce the hazard by letting people know they're not using a product that they've been used to using all along." As stated in Chapter VIII, Environmental Impacts, of the Staff Report (beginning with page 116), "Pure acetone has been widely used as an ingredient in a variety of consumer products and is readily available for sale as a stand-alone solvent." Additionally, the United States Consumer Product Safety Commission (CPSC) regulations require precautionary labeling of hazardous household products including flammable or extremely flammable Multi-purpose Solvent and Paint Thinner products. The Fire Chief also testified that "Our concern from the beginning has not been with the use of acetone

or another solvent to meet this regulation; our concern has been putting one product in a can and calling it something else."

In addition to the labeling provision, staff has proposed an effective date of December 31, 2013, for the second tier limit to allow manufacturers time to develop less flammable products. Staff has also committed to evaluating public safety as part of the technical assessment to be conducted in 2012. Based on staff's work with the Fire Chief, ARB has concluded that the combination of measures described above will effectively mitigate the potential adverse public safety impacts. It should be noted that accidents from misuse of acetone are rare, even though acetone and acetone-containing products (e.g. lacquer thinner) have been sold to consumers for many years and are widely available at home improvement and mass market retail stores. While it cannot be ruled out that a small residual risk may remain from the proposed amendments, ARB has concluded that the risk (if any) is not significant.

D-26. **Comment:** The small container exemptions could potentially create unintended loopholes. [SCAQMD1]

Response: The temporary exemption for small containers was proposed because it was brought to staff's attention that some California consumers may have previously purchased solvent-borne paints in their possession that may require a small volume of Paint Thinner. Secondly, there is an existing exemption from the VOC limits for architectural coatings packaged in containers with a volume of one liter or less. Staff has also been made aware of several categories of architectural paints with VOC limits primarily, but not exclusively, outside the South Coast Air Quality Management District, that allow for fairly high concentrations of solvents. It is anticipated that the emissions impacts from the small size exemption (8 fluid ounces or less) will be minimal. In addition, the small container exemption will sunset on December 31, 2013, which will further serve to minimize any impacts from the exemption.

D-27. **Comment:** We are concerned about staff's proposal to exempt artist's solvent/thinner sold in containers of up to 32 fl. oz. We feel this exemption is not necessary, and will continue to expose people to these dangerous chemicals. [CCA1]

Response: ARB staff surveyed Artists' Solvents and Thinners in the 2006 Consumer and Commercial Products Survey. The category sales reported for these products resulted in about 0.1 tons per day of VOC emissions compared to about 22 tons per day for Multi-purpose Solvents and Paint Thinners combined. The Artist's Solvent/Thinner exemption was suggested by industry experts and we agreed with this recommendation based on the category's low emissions and substantially higher sales price compared to Multi-purpose Solvent and Paint Thinner products sold at home improvement and paint stores. In addition, ASTM D 4236 requires that these products be reviewed by a board certified or qualified toxicologist and labeled consistent with the standard because these products are intended for use in the household or by children.

D-28. **Comment:** We request the Board proceed without delay toward the development of reactivity-based limits for the solvents products in cooperation with the District with the goal of replacing both State and District mass-based limits. Reactivity limits based on PW-MIR should be used in this Regulation, as they are for Aerosol Coatings. Waiting until 2012 to look into shifting to a reactivity limit is very unfeasible. Flammability and safety issues along with ozone formation potential

should be investigated sooner and considered in reactivity-based regulations. [CSPA1]

D-29. **Comment:** We suggest ARB proceed forward immediately with a reactivity rule that would provide equivalent ozone reductions and will also provide the industry formulation flexibility. [NPCA3]

D-30. **Comment:** I would like to emphasize the very high importance for the solvents and thinner products of moving expeditiously toward development of reactivity-based standards for these products to replace the mass-based standards that I expect you will adopt today. [CSPA3]

D-31. **Comment:** This category would be very suitable for a reactivity regulation and we would recommend dropping the mass based proposal in favor of a reactivity limit. [SW1]

D-32. **Comment:** We're asking that you take the time to include reactivity at this point. Contrary to staff's comments here, we are not proposing that reactivity should replace the mass approach. We're proposing an alternative control plan that would go alongside a mass-based approach. [ACCSIG3]

D-33. **Comment:** SIG strongly supports the adoption of reactivity-based standards either as the sole or at least an alternative compliance option for paint thinners and multi-purpose solvents. The proposed mass-based approach, in stark contrast, is outdated, needlessly rigid, and potentially counterproductive. [ACCSIG2]

D-34. **Comment:** CARB has been successful with using reactivity-based regulation for aerosol coatings, and should use this type of regulation for Multipurpose Solvent and Paint Thinner as well. Reactivity-based regulation would ensure emission reductions and provide flexibility for manufacturers. [WMB1]

Response to Comments D-28 through D-34: These commenters all contend that reactivity-based limits instead of mass-based VOC limits should be adopted. Staff disagrees with these comments. ARB's long-standing practice has been to pursue mass-based VOC limits when feasible, and only to pursue reactivity-based limits when mass-based limits are unfeasible or do not provide the needed ozone reduction benefits. In following this strategy, staff routinely evaluates whether a reactivity-based or mass-based approach would provide a greater overall reduction. In Chapter VIII, Environmental Impacts, of the Staff Report (beginning with page 100), staff determined that the proposed mass-based VOC limits coupled with the aromatic compound content limit would provide greater ozone reduction benefits than a reactivity-based limit, and would provide better statewide consistency. Therefore, the mass-based approach was proposed by staff and approved by the Board. However, we do agree that reactivity is a viable VOC control strategy and that it has worked well for regulating aerosol coatings. As part of a technical assessment to be conducted in 2012, after the implementation of the first tier, 30 percent VOC limit, staff will again evaluate whether a reactivity-based strategy, rather than implementing the 3 percent mass-based VOC limit, may be the better regulatory approach for Multi-purpose Solvent and Paint Thinner products.

One commenter also suggests that the Board act to override mass-based limits adopted by the SCAQMD and replace them with reactivity-based limits. As explained in the Response to Comment D-16, the SCAQMD has authority to adopt limits for those categories of consumer products where no State standard exists.

Because the SCAQMD acted prior to the ARB for these categories, the District acted within its legal authority to adopt VOC limits and ARB does not have the authority to preempt them.

The commenters request that for reactivity-based regulations, flammability, safety and ozone forming potential should be addressed sooner. Staff disagrees with this comment and directs the commenters to the near-term and longer-term provisions in the amendments that address these issues. The Response to Comments D-20 through D-25 is incorporated herein. For example, for public safety in the near-term, some flammable or extremely flammable products would have to be appropriately labeled to alert the consumer that the product has been reformulated and is different from the previous product. Ozone forming potential is also addressed in the near term by limiting the use of highly reactive aromatic compounds to no more than 1 percent by weight in reformulated products.

With regard to the proposed limits in the current rulemaking action, staff's technical assessment conducted in 2012, will further evaluate flammability, safety and ozone forming potential of products reformulated to meet the 30 percent VOC limit, as well as the predicted reformulation pathways to meet the 3 percent VOC limit. Because the assessment relies on evaluating the products reformulated to meet the 30 percent limit effective December 31, 2010, 2012 is the appropriate time to conduct this assessment because formulation data for the 30 percent VOC products will be available for the 2011 calendar year. Results of the assessment will be used to determine whether further regulatory changes are needed to address public safety. The assessment will also compare ozone forming potential of the 30 percent VOC products and assess whether formulations to meet the 3 percent VOC limit could result in higher reactive products, and thereby result in an ozone disbenefit. Depending on the assessment results, staff may propose reactivity limits to replace the 3 percent VOC mass limit. Staff also notes that one goal of allowing until December 31, 2013, to implement the 3 percent limit was to provide time for further development of less flammable and lower ozone forming product technologies.

The commenters also recommend that reactivity-based limits be adopted to give formulators flexibility. While we agree that reactivity limits do allow reformulation flexibility, survey data also indicate that to meet the mass-based VOC limits a number of viable reformulation options exist that will provide flexibility.

As to providing reactivity-based limits as a compliance alternative, staff determined during development of the reactivity-based Aerosol Coatings Regulation that using reactivity-based limits as an alternative compliance option to mass-based limits would not ensure that air quality benefits would be preserved. In an optional program, a manufacturer could choose the easier pathway to compliance for each product, which could result in reduced and unpredictable air quality benefits. For these reasons providing reactivity as an option is not appropriate.

Staff also disagrees with the contention that the mass-based approach is outdated, needlessly rigid, and potentially counterproductive. While ARB agrees that reactivity is a viable control strategy, ARB's general VOC control strategy has been to reduce the mass of VOCs. Air quality data clearly indicate that reducing the mass of VOCs has not been counterproductive, but rather has been very effective in reducing ground level ozone concentrations.

The commenters contend that use of reactivity will ensure that emission reductions are achieved. However, because reactivity limits allow for VOC substitution rather

than VOC replacement, staff finds that use of reactivity may not reduce mass emissions as effectively as will mass-based limits. Both strategies will result in ozone reductions, however, if correctly designed.

D-35. **Comment:** It is widely acknowledged that manufacturers will be forced to reformulate their products with Acetone. Acetone was exempted from the category of VOC because of its relatively low reactivity once it enters the atmosphere. However "reactivity" is only one variable influencing the capacity of a chemical to produce ozone in the atmosphere. The purpose of CARB's proposed regulation is to reduce ozone formation. However the opposite will likely occur given that Barr and other manufacturers will be forced to use Acetone. Barr strongly urges the Board to reject this proposed regulation. There are more reactive compounds besides aromatics that would be worse with regards to ozone-formation potential, which could be used under this proposal. In particular, there is potential for an increase in ozone formation due to acetone as a reformulation option to meet the 3% VOC limit. Acetone's volatility is very high, outweighing its low reactivity when it comes to ozone formation. This could cause it to form more ozone than a less volatile, but more reactive compound. Certain thinners that Barr currently sells which do not even meet the 30% VOC limit would form less ozone on a per-use basis than acetone, based on volatility and MIR values. [WMB1]

Response: The commenter contends that the amendments would force manufacturers to use acetone. While staff agrees that use of the VOC exempt solvent acetone is a feasible, likely option to meet the 3 percent VOC limit, the amendments do not force manufacturers to use acetone. Survey data, as well as staff's research into emerging technologies, indicate that other reformulation options are available to meet both the 30 percent and the 3 percent VOC limits. Staff believes use of acetone is a likely reformulation option because it is a more cost-effective option than other technologies.

The commenter also suggests that use of acetone will result in increasing ozone concentrations rather than reducing them. Staff agrees that there is some potential for this to happen as products reformulate to meet the 3 percent VOC limit. In Chapter VIII, Environmental Impacts, of the Staff Report (beginning with page 101), staff determined that depending upon the reformulation option chosen to meet the 30 percent limit, formulations using primarily acetone to meet the 3 percent limit could result in a slight increase in ozone forming potential from Multi-purpose Solvent and Paint Thinner products. Therefore, staff committed to conduct an assessment of products reformulated to meet the 30 percent VOC limit, along with their ozone forming potential, prior to the effective date of the 3 percent limit. To facilitate this assessment, special reporting requirements for these products were included in new subsection 94513(g). The goal of the assessment would be to determine whether the technologies available to meet the 3 percent limit would likely result in higher ozone forming potential than the reformulated 30 percent products. Depending on results of this evaluation, staff would propose any necessary changes to the VOC limits to ensure that the air quality benefits are preserved. Because we are aware of this potential, we proposed an effective date of December 31, 2013, for the 3 percent limit to allow for the development of additional, less reactive, technologies.

The commenter also contends that use of acetone, because of its high volatility, will result in more product use and thereby result in additional ozone being formed. While we agree that acetone is a fast evaporating solvent, the documentation staff were provided was not convincing evidence that use of Multi-purpose Solvent and

Paint Thinner products reformulated with acetone will cause appreciably more product use.

Staff also disagrees that the reasons cited in these comments provide a basis for rejecting the proposal. Staff believes the proposal contains commercially and technologically feasible limits, as required by State law, and achieves the maximum feasible reduction in VOC emissions from these categories. The proposal also has provisions in place to ensure that the predicted benefits occur.

D-36. **Comment:** I don't believe that they can ensure their emission reductions with a mass-based regulation. [WMB2]

Response: Staff disagrees that the amendments would not ensure emission reductions are achieved. As described in the Chapter VIII, Environmental Impacts, of the Staff Report (beginning with page 98), our analysis found that there would be a large mass and ozone reduction benefit from implementing the first tier, 30 percent VOC limit. Both mass-based and reactivity-based limits result in reducing ozone concentrations. However, mass-based VOC limits are more likely to effectively reduce VOC emissions than reactivity-based limits. This is because reactivity-based limits allow for VOC substitution rather than VOC reduction.

D-37. **Comment:** This is the first time that ARB has contemplated and proposed to use reactivity in a manner that is counterproductive or limiting to formulators. One of the fundamental principles of employing a reactivity strategy is to provide formulators the necessary flexibility to develop new product formulas. In this instance, however, such a reactivity element in the control strategy is specifically designed to limit a formulators options. This use of reactivity is contrary, counterproductive and will further handcuff formulators. [NPCA4]

D-38. **Comment:** The current proposed regulation contains a lack of flexibility for the manufacturer to develop future products due to restrictions on aromatics. This restriction is not necessary and stifles R&D efforts for the 3% proposed VOC limit. [WMB1]

D-39. **Comment:** The proposed 1% limitation on aromatic compounds restricts formulation flexibility and should be eliminated from the regulation. ARB should consider replacing this requirement with reactivity-based limits. NPCA is concerned about the precedent that this regulation may set for other consumer product categories in the future. [NPCA2; NPCA4]

D-40. **Comment:** We feel these aromatics provisions are reactivity concepts attached onto a mass-based rule. We don’t feel that’s been adequately demonstrated why CARB choose aromatics in particular, why they choose one percent. [ACCSIG3]

D-41. **Comment:** The inclusion of a restriction in the use of aromatic solvents or any other solvent class is very problematic for formulators of Paint Thinner or Multi-Purpose Solvent products. It is incomprehensible to manufacturers of consumer products that this or any other consumer products regulation would simultaneously use both, mass-based and reactivity based standards from a historical and technical perspective. The proposed restriction of 1% by weight for aromatic solvents restricts the use of all such aromatics, regardless of their reactivity value. Such a wholesale restriction on an entire class of compounds is not based upon sound science and will rob formulators of important reformulation strategies and tools. The proposed restriction on the amount of aromatic solvents that can be used in a formula is an

attempt to incorporate a reactivity element into a mass-based proposal for these categories. We believe that ARB could have a greater impact in the reduction and the exposure of VOCs by not adopting this aromatic solvent proposal. [NPCA4]

D-42. **Comment:** Limiting aromatics to 1 percent was proposed for reactivity reasons. However, if the ARB wishes to continue with a mass based regulation we strongly urge the 1 percent aromatic restriction be dropped from the regulation. [SW1]

D-43. **Comment:** The inclusion of an "aromatic" restriction would not be necessary if a reactivity-based standard were adopted. Numerous non-aromatic compounds are more reactive than aromatic compounds. [NAA1]

D-44. **Comment:** The one percent aromatic restriction will further restrict alternatives to acetone. Therefore, we also recommend ARB remove the one percent restriction. [NPCA3]

D-45. **Comment:** CARB's proposed aromatics prohibition is arbitrary and capacious. The proposed standard is essentially a reactivity-based provision grafted onto a conventional mass-based approach. CARB's selective use of reactivity unfairly serves only to make the mass-based approach more onerous and denies formulators needed flexibility. [ACCSIG2; NPCA4]

D-46. **Comment:** SIG requests that CARB suspend consideration of the proposed amendments because the proposed aromatics prohibition is arbitrary and capricious. If CARB is going to rely on reactivity-based concepts, then it ought to adopt the concept in its entirety. It is not justified to limit aromatics so much, when other types of compounds that are more reactive than aromatics could be used to reformulate Multipurpose Solvent and Paint Thinner and thereby undermine the reductions sought. Why the 1% limit on aromatics? Why not 2 or 5%? CARB should account for the reason on 1% limit and allow stakeholders to comment before finalizing. [ACCSIG1]

Response to Comments D-37 through D-46: These comments are directed at the provision of the proposed amendments that would limit the use of aromatic compounds to 1 percent by weight. Staff disagrees that the aromatic compound limit should be eliminated. As part of the evaluation required by the California Environmental Quality Act (CEQA), we determined that use of highly reactive, aromatic solvents in reformulated products could result in increasing the ozone-forming potential of products reformulated to meet the 30 percent VOC limit, thereby eroding the predicted ozone reduction benefits. Staff's evaluation and rationale for the limit is set forth in Chapter VIII, Environmental Impacts, of the Staff Report (beginning with page 100). Because staff determined there would be a potential adverse impact if aromatic compounds were used in significant quantities, as a mitigation measure, staff proposed and the Board approved a limit on the amount of aromatic solvents used in the products' final formulation to 1 percent by weight. The 1 percent aromatic compound limit preserves, and more likely improves, the air quality benefits of the proposed VOC limits.

The commenters contend that limiting the aromatic content of Multi-purpose Solvent and Paint Thinner products is proposed for reactivity reasons and that use of reactivity should not be combined with mass-based VOC limits. Staff agrees that the aromatic compound limit is a reactivity-based provision. However, we disagree that the two control strategies cannot be used together. Our analysis demonstrates that

this approach provides the best overall air quality benefit in the regulation of these products.

The commenters also contend that the aromatic compound content limit would not be needed if reactivity-based limits were adopted rather than mass-based limits. They further contend that greater reductions could be achieved by not adopting the 1 percent aromatic compound limit. ARB disagrees with these comments. Because staff's analysis found that significant use of aromatic compounds in reformulations could erode ozone reduction benefits, any reactivity-based limits would have to account for this and be set at a low enough level to preclude use of highly reactive compounds. The commenters offer no evidence to support the contention that greater reductions could be achieved by not adopting the 1 percent aromatic compound limit. To the contrary, staff's analysis found that this proposal provides the maximum feasible reduction from Multi-purpose Solvent and Paint Thinner products.

The commenters further contend that the rationale for the restriction on use of aromatic compounds is not adequately explained. Staff disagrees with this comment. The rationale for the proposal is set forth in Chapter VIII, Environmental Impacts, of the Staff Report (beginning with page 100). As explained previously, staff determined that use of highly reactive solvents in reformulated products could result in higher ozone forming potential. In determining what level of aromatic compound restriction would be appropriate, staff evaluated the most likely reformulation pathways and the resulting reactivity of those products. This analysis revealed that the reactivity of a typical product complying with the 30 percent VOC limit using a water-hydrocarbon emulsion would be about 0.35 grams ozone per gram product and contain less than 1 percent aromatic compound content. Based on this, staff determined that in order to preserve the predicted ozone benefits, a 1 percent aromatic compound limit was necessary. Limiting aromatic content to 1 percent by weight maintains consistency of ozone forming potential of reformulated products. This analysis, contained in the Staff Report, was made available for public comment for 45 days prior to the Board hearing.

The commenters also contend that more reactive solvents, that do not meet the aromatic compound definition, could still be used in reformulated Multi-purpose Solvent and Paint Thinner products. While the commenters do not provide the identification of the more reactive solvents that could be used in reformulated Multi-purpose Solvent and Paint Thinner products, staff acknowledges that VOCs do have wide ranging reactivities, and that some classes of compounds may be nearly as reactive as aromatic compounds. However, staff evaluated potential reformulation options and determined that limiting use of aromatic compounds would best preserve the ozone reduction benefits of the proposal. As part of the evaluation, staff had to ensure that several viable reformulation options would remain if aromatic compound use was restricted. Prohibiting additional classes of organic compounds that have reactivities close to those of aromatic compounds could restrict reformulation flexibility and result in infeasible products. Therefore staff proposed the restriction on the compounds with among the highest ozone impacts. Staff acknowledges that the 1 percent VOC limit may eliminate one potential reformulation option, but other reformulation options are available to provide flexibility to produce effective products. Moreover, as part of the technical assessment to be conducted in 2012, staff will evaluate the continued need for the aromatic compound restriction.

The commenters also contend that the 1 percent aromatic compound limit will restrict formulators to the use of acetone, and that it restricts use of all aromatic compounds

regardless of their reactivity. Staff disagrees with these contentions. To meet the 30 percent VOC limit, survey data show that a variety of other organic chemicals can be used to formulate complying products. To meet the 3 percent VOC limit, fewer reformulation strategies are currently available. However, the contention that all aromatic compounds are limited to 1 percent by weight is incorrect. The definition for "Aromatic Compound" excludes the VOC exempt aromatic compounds such as para-chlorobenzotrifluoride (PCBTF).

As to the aromatic compound limit setting a precedent, staff disagrees. As always, each category proposed for regulation is in accordance with CEQA. Only where a potential adverse impact is identified would staff recommend a similar restriction.

Staff disagrees that the 1 percent aromatic compound limit is arbitrary and capricious and is not based on sound science. The rationale and need for this provision was clearly set forth in Chapter VIII of the Staff Report. While the commenters suggest that this provision is not based on sound science, the commenters also urge adoption of a reactivity-based regulation. If the science of reactivity is sound science for developing an entire regulation, it can also be suitable for setting a 1 percent aromatic compound limit.

It should also be noted that staff acknowledged that there are some paint products that require thinning with an aromatic solvent in order for the paint to be usable. These types of thinning products were specifically excluded, temporarily, from compliance with the VOC and aromatic compound limits.

D-47. Comment: The definition for the aromatics that has been proposed is also too broad. [SW2]

D-48. Comment: The definition of aromatic compounds is too broad and difficult to verify through testing. [NAA1]

D-49. Comment: The aromatic restriction is broadly defined, it's going to impede our R&D, and it's just not a good precedence. [WMB1; WMB2]

D-50. Comment: The current definition of aromatics is overly broad and may include several compounds that do not contribute to ozone formation. [WMB1]

D-51. Comment: Limiting PCBTF to 1%, will restrict safer alternatives to acetone. [NPCA2; NPCA4]

D-52. Comment: The Board should eliminate the provision on aromatic compounds, or adjust the definition to include only reactive, ozone-forming compounds. [CSPA1]

Response to Comments D-47 through D-52: These commenters suggested that the proposed definition of "Aromatic Compound" was too broad and should be further clarified. Staff agreed and at the hearing proposed that the definition of "Aromatic Compound" be further clarified. The Board approved staff's recommendations. The modified definition would limit "Aromatic Compound" to mean an aromatic compound with an initial boiling point less than or equal to 280 degrees Celsius.

These commenters further indicated that it was unclear if the proposed definition would exclude VOC-exempt aromatic solvents, such as PCBTF, from the 1 percent aromatic compound limit. The intent of the originally proposed definition was to exclude negligibly reactive exempt compounds such as PCBTF. In light of the

confusion, staff proposed further modifications to the definition of "Aromatic Compound" to clarify that VOC-exempt aromatic compounds, such as PCBTF, would not meet the definition. Thus, the definition only includes reactive, ozone-forming compounds, and clarifies that use of exempt VOC compounds can be part of manufacturers' research and development efforts. These definitional modifications were proposed as part of the first 15-day public comment period.

Staff disagrees with the comment that the laboratory analysis for aromatic compound content is too difficult. ARB laboratory staff routinely tests for common aromatics, such as the xylene isomers and toluene. These analytical capabilities will need to be expanded, and that work is underway. Standard test methods exist that will allow quantification of aromatic content.

As to the aromatic compound limit setting a precedent, staff disagrees. As always, each category proposed for regulation is in accordance with CEQA. Only where a potential adverse impact is identified would staff recommend a similar restriction.

D-53. **Comment:** SIG requests that CARB suspend consideration of the proposed amendments based on the following concerns: 1) 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. 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; 2) 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. This approach has worked for Aerosol Coatings, and is used now by US EPA as the standard approach for aerosol coatings as well. Reactivity-based control of ozone producing compounds is superior to mass-based controls. Mass-based controls could reduce the expected amount of ozone reduction because of reformulations that use compounds of higher reactivity than are currently used. Concerns of reactivity-based standards increasing concentrations of PM2.5 or secondary aerosol formation are unfounded. Toxicity of compounds is not the same as risk factors—these limitations should be determined based on actual risk. The four alternatives CARB has considered are legally insufficient because they do not include considering the fifth alternative which is a reactivity-based approach. CARB is legally obligated to state its reasoning for rejecting reactivity. CARB's concerns that reactivity-based limits would have questionable enforceability, is no different than any other kind of compliance regulation enforceability. SIG offers to help with obtaining third-party certification if that would help. If a reactivity approach is not adopted over the mass-based regulation, and a 1% limit on aromatics is implemented (based on the high reactivity of aromatics), then a reactivity-based option should be available as an Alternative Control Plan for reformulating Multipurpose Solvent and Paint Thinner. [ACCSIG1]

Response: Staff disagrees with this comment. In response to the first point, the Response to Comments D-28 through D-34 is incorporated herein. While ARB supports the use of reactivity in regulations, in the case of Multi-purpose Solvent and Paint Thinner products, it was determined that mass-based limits provided the best air quality benefit. The technical assessment to be conducted in 2012, however, will include an evaluation regarding whether a reactivity-based strategy should be implemented rather than the 3 percent mass-based VOC limit. The evaluation will analyze reformulations to meet the 30 percent limit and compare the reactivities of these products to those of likely reformulations to meet the 3 percent limit. At that

time, if it appears that a reactivity-based VOC limit better preserves the air quality benefits, staff would propose appropriate amendments to the Board for their consideration.

Regarding the commenter's point on staff's evaluation of alternatives, staff did evaluate a reactivity-based strategy, as explained in Chapter VIII of the Staff Report (beginning with page 98), and rejected this approach in the near term because mass-based VOC limits provided greater ozone reduction benefits. Staff determined that the 30 percent VOC limit, in combination with the 1 percent aromatic compound limit, provided the better air quality benefit.

Contrary to what the commenter further suggests, in the analysis to determine whether mass-based or reactivity-based limits were more appropriate, staff also considered $PM_{2.5}$, secondary organic aerosol formation, as well as toxicity. Staff determined that neither approach would exacerbate or improve these air quality problems more than the other approach. Moreover, in determining the better regulatory approach, enforceability of reactivity-based limits was not the rationale for rejecting this approach; mass-based limits provided greater ozone reduction benefits, and promote statewide consistency in consideration of the SCAQMD's mass-based limits for these product categories. However, staff appreciates SIG's offer to assist, if needed.

Finally, regarding reactivity-based limits as a compliance option, staff determined during development of the reactivity-based Aerosol Coatings Regulation that using reactivity-based limits as an alternative compliance option to mass-based limits did not ensure the air quality benefits would be preserved.

D-54. **Comment:** The restrictions proposed for global warming, chlorinated chemicals, and aromatics take away too many tools available to formulators. [SW1]

Response: Staff disagrees with this comment. In evaluating survey data for complying and non-complying products, staff found no use of compounds with high global warming potentials, or use of the chlorinated toxic air contaminant solvents methylene chloride, perchloroethylene, and trichloroethylene. Because of this, staff determined that their use was not essential for these products and proposed mitigation measures to restrict their use in reformulated products. The rationale for these restrictions is set forth in Chapter VIII of the Staff Report. Related to the aromatic compound content limit, the Response to Comments D-37 through D-46 is incorporated herein. Survey data show that complying products can be formulated without the use of aromatic compounds.

D-55. **Comment:** NAA recommends removing the 3% limit and the aromatic compound restriction and focus on adopting a reactivity based regulation, which will also remove the fire risk issue. [NAA1]

D-56. **Comment:** We recommend that you remove the three percent effective VOC limits, remove the aromatic restrictions, instruct the staff to develop a future reactivity regulation to be effective by 12/31/2013. [WMB1; WMB2]

Response to Comments D-55 and D-56: These commenters contend that the 3 percent VOC limit and aromatic compound content limit should be removed from the amendments. Staff disagrees with these comments. State law requires ARB to achieve the maximum feasible reduction of VOC emissions from consumer products. The 3 percent limit would allow the maximum feasible reduction to be achieved. In

approving the 3 percent limit, the Board directed staff to conduct a technical assessment of the feasibility of the limit, prior to the effective date, to determine if a reactivity-based approach may be more appropriate. Part of the assessment would compare the reactivities of the technologies used to meet the 30 percent limit and determine whether technologies to meet the 3 percent limit would result in more reactive products than those meeting the 30 percent limit. The assessment would also review the ongoing need for the aromatic compound limit.

The commenters further suggest that a reactivity-based regulation should be adopted instead. The Response to Comments D-28 through D-34 is incorporated herein. Staff found that the mass-based proposal, along with the aromatic compound limit, provided the best overall air quality benefit and was consistent with State law.

As to removing the fire risk if a reactivity-based regulation were adopted instead, staff believes the fire risk would remain. The exempt solvent acetone, which is an extremely flammable compound, would likely be used extensively to meet reactivity-based VOC limits because of its low reactivity.

Related to removing the aromatic restriction, the Response to Comments D-37 through D-46 is incorporated herein. Staff found that without this provision, air quality benefits could be eroded. However, the 2012 technical assessment will assess the ongoing need for the aromatic compound limit.

D-57. **Comment:** Method 310 has not been proven to be able to adequately test aromatics at less than 1% and therefore the regulation would be unenforceable. [WMB1; SW2]

Response: Staff disagrees with the commenters. Method 310, the existing enforcement test method for the consumer products program, has been shown to adequately test for common aromatic compounds such as benzene; toluene; xylene isomers; ethyl benzene; and trimethyl benzene. Our analysis of survey data show that these compounds constitute the vast majority of aromatic compounds used in Multi-purpose Solvent and Paint Thinner products. Nevertheless, Method 310 will be amended to incorporate other standardized test methods to enable analysis for all "Aromatic Compounds." The modifications will allow us to quantify higher molecular weight aromatic compounds that are not currently used in Multi-purpose Solvent and Paint Thinner products in significant quantities. Staff's proposed modifications to Method 310 will be made available for a 45-day public comment period and presented to the Board for their consideration. Additionally, the proposed modifications will ensure that the 1 percent aromatic compound content limit is enforceable for all Aromatic Compounds.

D-58. **Comment:** NPCA/FSCT continues to be concerned that few effective products exist today that will meet the 3% limit, as a result we question the feasibility of the proposed rule. [NPCA2]

D-59. **Comment:** Staff does not provide information on technical feasibility of the proposed 3% limit. The 3% limit is not feasible without the use of Acetone. The 3% limit should be eliminated from the proposed regulation. [WMB1]

D-60. **Comment:** CARB has not met its legal burden of demonstrating that its proposed regulations are commercially and technically feasible and necessary. We ask that you at least postpone Tier 2 until CARB can complete its assessment that it's committed to do by 2012. [ACCSIG2]

D-61. **Comment:** The three percent limit being proposed is simply not a viable limit. A three percent limit in this category will cause an extreme loss of functionality, and many of the current uses and applications will no longer be viable. [SW2]

D-62. **Comment:** We are concerned that this rule will restrict the availability of effective paint thinners and multi-purpose solvents. We suggest ARB delete that three percent limit. [NPCA3]

Response to Comments D-58 through D-62: While staff disagrees with the comments, we acknowledge that there are only a few reformulation pathways currently in commerce that will meet the 3 percent limit. Survey data indicate that there are existing products that meet the future effective 3 percent VOC limit without the use of acetone. Additionally, staff's research found that additional technologies, such as use of low vapor pressure (LVP)-VOC methyl esters or hydrocarbons, or the use of other VOC exempt solvents, provide viable alternatives. To allow time for additional technologies to be developed as alternatives to acetone, the Board approved an effective date of December 31, 2013. In addition, staff has committed to conducting a technology assessment on or before June 30, 2012, to assess manufacturers' progress towards developing products that can meet the proposed 3 percent VOC limit.

D-63. **Comment:** SIG requests that CARB suspend consideration of the proposed amendments because CARB has not met its legal burden of demonstrating that its proposed regulations are commercially and technologically feasible and necessary. The 3% second-tier standard has not been demonstrated for thinners, and impacts cannot be fully assessed until more information is obtained. Interested stakeholders have not had the opportunity to review and comment on the full detail of CARB's 2008 Paint Thinner and Multipurpose Solvent survey update. Since CARB cannot conclusively demonstrate that its tier 2 standard is feasible for thinners, it should table further consideration of the tier 2 standards until it can complete its technology assessment in 2012. CARB has not sufficiently proven that current technology can meet the tier 1 limits of 30% VOC without using acetone as the predominant thinner, and CARB has admitted that acetone is not adequate for thinning all types of coatings. CARB has not demonstrated that this proposal is necessary to attain State and federal ambient air quality standards, especially since it is not considering a reactivity-based standard. The proposal to limit high GWP compounds to 150 needs to be analyzed for projected actual climate benefits, and for cost-benefit and feasibility assessments. [ACCSIG1]

Response: In response to the first point, the commenter is referred to Chapters III and IV of the Staff Report where staff explains the commercial and technological feasibility of the proposed amendments and the necessity of the modifications to attain both State and federal standards. The Response to Comments D-58 through D-62 is incorporated herein. Related to the survey update, ARB fully disclosed the Multi-purpose Solvent and Paint Thinner product survey data received from the 2003 Consumer & Commercial Products Survey and then, at the suggestion of industry, staff conducted a survey update for these products in 2008. However, staff acknowledges that for confidentiality purposes, we did not distribute the full data summaries for the Paint Thinner and Multi-purpose Solvent Survey Update. Any time the same or a similar data set is disclosed more than once, there is potential to ascertain confidential business information by comparing the different data sets released. Staff make every effort to ensure that under no circumstances is any confidential information disclosed. Several members of industry requested specific

survey update data, and for each request, staff considered whether there was potential to disclose any confidential information. Staff was able to furnish industry representatives with the information they requested after determining that limited survey update data could be disclosed without revealing any confidential information. Adequate data was disclosed to demonstrate that the proposals are technologically and commercially feasible.

Staff disagrees that current technology has not demonstrated that the first tier, 30 percent VOC limit cannot be met without acetone. There are a number of technologies currently in commerce, including water/hydrocarbon solvent emulsions, that demonstrate that the 30 percent VOC limit can be met without acetone.

Also, since staff did not find any solvents with high GWP values used in Multi-purpose Solvent or Paint Thinner product formulations, staff believes that the GWP limit proposal of 150 is feasible, cost-effective, and appropriate to ensure there is no significant increase in greenhouse gas emissions from reformulated products.

D-64. **Comment:** NPCA/FSCT appreciates the 2012 technology review ARB will have regarding Multipurpose Solvent and Paint Thinner reformulations. [NPCA2]

Response: Comment noted.

D-65. **Comment:** We haven't been provided detailed information from CARB's consumer products survey update. [ACCSIG3]

Response: Staff assumes the commenter is referring to information specific to the Paint Thinner and Multi-purpose Solvent Survey Update. The Response to Comment D-63 is incorporated herein.

D-66. **Comment:** The proposed "Multi-purpose Solvent" definition should be modified to include "Paint Clean-up." As originally proposed, the language is contradictory. [WMB1]

Response: Staff agrees with the comment and proposed modifications to the "Multi-purpose Solvent" definition in the first 15-day public comment period. The modifications included moving the "Paint Clean-up" definition to within the "Multi-purpose Solvent" definition, thereby eliminating the contradiction.

D-67. **Comment:** Given the possible overlap with surface coating rules, we request staff work with industry to develop compliance materials to clarify regulatory language after the adoption of the rule. [NPCA3]

Response: Staff agrees with the commenter and intends to provide guidance materials related to Multi-purpose Solvent and Paint Thinner products on ARB's Consumer Products Program website.

D-68. **Comment:** Companies should be able to provide 30 days instead of 10 days to supply information to allow a reasonable time period for small companies and those needing to obtain the information elsewhere. [CSPA1]

Response: Staff agreed and proposed at the Board hearing that responsible parties and manufacturers should be allowed 30 working days, rather than 10 working days, to provide to the Executive Officer formulation data for products selected for compliance testing with the proposed aromatic compound content limit.

Subsequently, section 94515(h) was further modified to delete this requirement as part of the first 15-day public comment period.

D-69. **Comment:** When used for low VOC products, Method 310 is not adequate because its sensitivity and accuracy are too low, and its water content determination is unreliable. I suggest using ASTM D6886-03 instead for low-VOC products. [OPPL]

Response: Staff disagrees with this commenter that Method 310 is not an accurate method for determining VOC content for all products with low amounts of VOC. However, we agree that when products contain high water content, in combination with low VOC content, the accuracy of the existing Method 310 is not adequate. Therefore, staff developed procedures to directly determine the VOC content of these products that does not rely on water content determination. These procedures will allow for accurate determination of VOC content in products with high water content. In this rulemaking, staff proposed and the Board approved, amendments to Method 310 to incorporate these new procedures. Staff disagrees that ASTM D 6886-03 should be incorporated into Method 310. This method was developed for VOC content determinations for latex air-dry coatings and is not appropriate for determining VOC content in the wide variety of consumer products categories.

D-70. **Comment:** If at all possible, we would like to have CARB state in the rule, in a letter, or as an interpretation from enforcement that solvents and reducers that are specifically designed to be used with in a marine/pleasure craft coating or for an automotive refinish coating are not included in the proposed regulation of multi-purpose solvents and paint thinners. We also respectfully request that CARB state in the preamble to the rule that refinish operations are not subject to the regulation because auto refinish is an "industrial use" of the solvents and moreover the refinish operations occur at a stationary source and "consumer product regulations do not impose any restrictions on pollution-generating activities that take place at stationary sources." Consumer products regulations do not regulate industrial stationary sources of air pollutants. If refinishing operations were subject to Consumer Products Regulations, there would be no need for an SCM for automotive refinishing operations. If auto refinishing were not considered "industrial," there is confusion on what regulatory rules apply, and no clarity exists on impacts where districts are under national VOC refinishing rules. For example in SCAQMD, there is Rule 1171 for industrial solvent cleaning, and Rule 1143 for consumer products solvents, so which part of CARB's regulations would apply? Separation and exclusion of industrial applications including "professional use" from general retail consumer use should be stated in this regulation. [NPCA1]

Response: Staff acknowledges that clarifications of rule applicability as suggested by the commenter would be helpful. Therefore, the following response serves to clarify the applicability of the proposed amendments. When considered together, the applicability of the regulation found in section 94507 and the definitions of Consumer Product; Institutional Product; Multi-purpose Solvent; and Paint Thinner in section 94508(a), make it clear that solvents and reducers labeled to be used exclusively in marine and automotive coatings are not subject to the regulation. The Suggested Control Measure that the commenter refers to specifies the VOC content limits of the coatings for which the solvent products are a part. However, the use of solvents in automotive refinishing is not an industrial application and is subject to local air district rules. Further, the Consumer Products Regulation would apply to the VOC content of the solvents sold to the facility that were not part of a coating system. The Response to Comment D-67 is incorporated herein.

D-71 **Comment:** Sacramento Metropolitan Air Quality Management District (SMAQMD) believes that ARB's 3% limit is virtually equivalent to SMAQMD's Rule 466 25 gram limit, even though it is stated in different numerical units. Does ARB agree that District Rule 466 is consistent with the proposed regulation and 41712(f)? [SMAQMD]

Response: While staff agrees that the second tier, 3 percent VOC limit is virtually equivalent to 25 grams per liter, ARB's Multi-purpose Solvent limit specifies that "no person shall sell, supply, offer for sale, or manufacture for sale in California any consumer product which, at the time of sale or manufacture, contains volatile organic compounds in excess of the limits specified in the following Table of Standards after the specified effective dates." Therefore, ARB is limiting the VOC content of Multi-purpose Solvent products, as manufactured, as opposed to the use limitation Rule 466 requires of solvent cleaning operations conducted by businesses. ARB's Multi-purpose Solvent VOC limit complements SMAQMD's Rule 466 and staff believes that formulation technologies developed by manufacturers to meet Rule 466, and other similar California air district rules, may be used to meet ARB's proposed statewide Multi-purpose Solvent VOC limits.

D-72 **Comment:** ARB has indicated that South Coast's Rule 1143, which will implement ARB's 2013, 3% VOC limit in 2010, is not affected by the ARB rulemaking, even though the deadlines for compliance are different. The same issue is raised by the District's September, 2009 implementation of its 25 gram VOC limit. Does ARB agree that the early implementation of the new limit under Rule 466 is consistent with 41712(f)? [SMAQMD]

Response: ARB's response to Comment D-71 addresses the differences between ARB's proposed statewide Multi-purpose Solvent VOC limits and SMAQMD's Rule 466. Since ARB's and SMAQMD's rules contain different requirements, the implementation of SMAQMD's 25 grams per liter limit is not affected by the proposed statewide VOC limits for Multi-purpose Solvent consumer products.

IV. SUMMARY OF COMMENTS MADE DURING THE FIRST 15-DAY COMMENT PERIOD AND RESPONSES

The table below identifies the comments received during the first 15-day comment period. The table provides a correlation between (1) the abbreviation used in this Section IV to refer to a comment letter; and (2) the name of the person(s) signing the comment letter. Written submittals were received between January 14, 2010, and January 29, 2010.

Comment Abbreviation	Commenter
ACA	Heidi McAuliffe, American Coatings Association Written testimony: January 29, 2010
ACCSIG4	Leslie Berry, American Chemistry Council Solvents Industry Group Written testimony: January 29, 2010
CSPA4	Joseph Yost, Consumer Specialty Products Association Written testimony: January 29, 2010
NAA2	Doug Raymond, The National Aerosol Association Written testimony: January 29, 2010
SCFPO3	Steve Bunting, Southern California Fire Prevention Officers Written testimony: January 14, 2010

WMB3	Michael Cooley, WM Barr and Company, Inc. Written testimony: January 28, 2010

1. **Comment:** No objection to the changes to the definitions or those in Section 94512(e). Strongly agree with the addition of the Spanish text in subsection 2, A and B. [SCFPO3]

Response: Comments noted.

2. **Comment:** CSPA supports the ARB's decision to withdraw proposed additional labeling requirements for the Multi-purpose Solvent and Paint Thinner categories. CSPA believes only listing the VOC content on a product label fails to account for other environmental health and safety factors and important environmental factors that may impact potential ozone formation which may mislead consumers. [CSPA4]

Response: Comments noted, however, staff has committed to continue evaluating VOC content labeling and may propose a similar requirement in a future rulemaking.

3. **Comment:** NAA recommendations that ARB staff amend the proposed Aromatic Compound definition to the following: "Aromatic Compound" means a carbon containing compound that contains one or more benzene or equivalent heterocyclic rings and has an initial boiling point less than or equal to 280^{o}C. "Aromatic Compound" does not include compounds excluded from the definition of Volatile Organic Compound (VOC) and compounds defined as a LVP-VOC in this Section 94508(a). [NAA2]

4. **Comment:** Barr supports the NAA's recommendation to change the Aromatic Compound definition to exclude LVP-VOCs. [WMB3]

5. **Comment:** CSPA urges ARB to use a definition of "Aromatic Compound" that is consistent with the current regulatory definition of "VOC Content." [CSPA4]

6. **Comment:** ACA supports reconciliation of this language in order to ensure that the definition of "Aromatic compound" does not include compounds defined as LVP-VOC. Both NAA and CSPA's proffered solution will accomplish this. [ACA]

7. **Comment:** SIG urges CARB to revise the proposed aromatic definition to the following: "Aromatic Compound" means a carbon containing volatile compound whose predominant components contain one or more benzene or equivalent heterocyclic ring(s) and has an initial boiling point less than or equal to 216 C. "Aromatic Compound" does not include compounds excluded from the definition of Volatile Organic Compound (VOC) in this Section 94508(a). [ACCSIG4]

Response to Comments 3 through 7: The definition suggested by these Commenters is not appropriate. There are reactive aromatic compound solvents with initial boiling points greater than 216 degrees Celsius. These aromatic compounds do meet the definition of LVP-VOC, and would therefore not 'count' towards overall VOC content. Because they are highly reactive compounds, however, it is prudent to extend the definition of "Aromatic Compound" to include these solvents. The initial boiling point criterion of 280 degrees Celsius is designed to include these aromatic compounds.

V. SECOND 15-DAY PUBLIC COMMENT PERIOD

Additional modifications to the regulatory text were made available to the public for a second 15-day comment period from June 28, 2010, to July 13, 2010. No comments were received during this comment period.