



October 17, 2007

Dr. Dongmin Luo, Manager
Air Quality and Climate Science Section
Research Division
California Air Resources Board
1001 I Street
Sacramento, California 95812

Re: Environmental Impact Assessment of Selected Halogenated Chemicals (Draft)

Dear Dr. Luo:

Thank you for the opportunity to comment on the draft report titled, "Environmental Impact Assessment of Selected Halogenated Chemicals." In general, 3M supports the conclusions and recommendations of the draft report. Please consider the following comments in the process of finalizing the report.

1. Stakeholder Interest

3M has been commercializing sustainable alternatives to ozone depleting substances and compounds with high global warming potential for the past 12 years. These alternatives, Novec™ Engineered Fluids, strike a balance of properties demanded by high valued electronics and semiconductor applications. In addition to providing products that don't contribute to the formation of photochemical smog, the balance includes performance, non-flammability, low toxicity, non-ozone depleting (ODS), and low global warming potential (GWP). Global regulatory bodies have highlighted the utility of these substitutes in enabling reductions of ODSs and compounds with high GWP. 3M manufactures Novec 7100 and Novec 7200.

2. 3M Supports Exempting Novec 7200

The draft report recommends exempting Novec 7200 from the definition of a Volatile Organic Compound (VOC) but does not recommend exempting Novec 7100 or the other candidates reviewed. The recommendations of the report impact the formulation options for the consumer product categories of electronic and electrical aerosol cleaners. 3M agrees with CARB's recommendation to exempt Novec 7200 from the definition of a VOC but is concerned that CARB did not see fit to also exempt Novec 7100. If, in CARB's assessment, it was concluded that multiple exemptions were not necessary for formulating non-flammable electronic and electrical aerosol cleaners, then 3M agrees that the CARB recommendation to exempt only Novec 7200 reflects the selection of the best available technology for providing formulation flexibility for aerosol cleaners. 3M

acknowledges that Novec 7200 enables formulation of safe, sustainable electronic and electrical aerosol cleaning products with the least environmental impact of those candidates being considered for exemption. 3M requests, however, that CARB reconsider its recommendation for Novec 7100 because it provides clear advantages over chlorinated solvents and the HFCs and HCFCs considered for exemption and provides the industry with additional formulation flexibility.

3. Concern for Unintended Consequences of Converging Regulations

3M is also concerned about potential unintended consequences of the various regulatory impacts on electronics and electrical cleaners. 3M has yet to sort through the road map resulting from multiple regulatory impacts including CARB regulations on chlorinated solvents, 2008 VOC limits on electronic and electrical categories, and the pending impact of AB 32 Early Actions on consumer products. The path that will be taken by formulators is not yet clear. 3M encourages CARB to assess whether or not the combined effects of these regulations could lead to unintended consequences such as:

- A. Continued or increased use of n-propyl bromide (nPB) in electronic and electrical cleaners. nPB is currently commonly used in electronic and electrical cleaners. nPB is an ozone depleting substance and, from a toxicity perspective, is equal to or more hazardous than the chlorinated solvents that have been restricted from use in these end use categories.
- B. Increased use of HFC-134a to get to VOC compliant electronic and electrical cleaning products prior to implementation of the proposed AB32 early actions. The climate impact of such a market transition would erase perceived gains from not exempting high GWP candidates from the definition of a VOC.

4. Continued Consideration of the Balance of Properties

CARB recommended that air pollution control districts in California consider potential health impacts, global warming potential and ozone depletion potential as they review new candidates for VOC exemptions or review previously granted exemptions. As CARB did in its preparation of this impact assessment, CARB should also encourage the districts to give appropriate consideration to safety, e.g., flammability, and performance considerations. Please consider that applications regulated by the districts may require more formulation flexibility than what is necessary to formulate non-flammable aerosol products. A thorough review of the entire balance of properties would need to be made on an application specific basis.

5. Other Comments

Pg. 8. Para 3. The report notes that the subject chemicals “react too fast to contribute to stratospheric ozone depletion.” That phrase does not adequately explain why HFCs and HFEs don’t deplete stratospheric ozone. Please consider that, other than the HCFCs addressed in this report, the subject chemicals don’t contain either chlorine or bromine and, therefore, don’t contribute to stratospheric ozone depletion. Fluorine, in general

does not contribute to stratospheric ozone depletion because its rate of reaction with the atmospheric constituents of concern is inconsequential.

3M also wishes to thank CARB and OEHHA for their reconsideration of OEHHA's earlier assessment of Novec 7100 and Novec 7200. 3M agrees with the conclusion that "peroxisome proliferation, in and of itself, is not sufficient to consider a chemical carcinogenic to humans." There is a very robust set of toxicity data on both Novec 7100 and Novec 7200 that would allay any concern regarding the carcinogenicity of these materials.

Lastly, 3M requests CARB to consider the timing for the Board to consider the proposed exemptions from the definition of VOC relative to the ability to meet the 2008 VOC limits for electronic and electrical cleaners. With the former not likely to happen until June, 08 and category limits coming into play in January, 3M requests CARB to consider Novec 7200 exempt for compliance purposes until the Board takes final action on this issue.

3M wishes to thank CARB for their careful consideration of written comments and dialogue regarding this issue over the past few years. 3M supports the conclusions and recommendations of the draft report but does ask that CARB also consider the concerns included with these comments.

Sincerely,



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January 28, 2008



Dr. Dongmin Luo, Manager
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1001 I Street
Sacramento, California 95812

Re: Environmental Impact Assessment of Selected Halogenated Chemicals

Dear Dr. Luo:

After having reviewed the comments submitted regarding the subject report, 3M has the following additional comments for your consideration.

The comments to date stress the importance of having solvents that have desirable flammability characteristics, dielectric properties, plastics compatible, and provide adequate solvency for reliable cleaning performance. These properties provide utility in formulating electrical, electronic, and contact cleaners. The proposed exemption of Novec 7200 would provide additional flexibility in formulating products that meet this desired balance of properties and also meet the VOC limits for the affected product categories. Not only is Novec 7200 non-flammable but it can also be used as a component with flammable solvents to inert, to varying degrees, the flammability of those solvents. The very high dielectric strength of Novec 7200 provides utility in cleaning on or around energized circuitry. Novec 7200 is also plastics compatible and, again, can be used to customize formulations to achieve desired cleaning and compatibility characteristics.

Short-term testing of Novec 7200 fluid demonstrates compatibility, after one hour exposure at the boiling temperature, with a wide range of metals, plastics and elastomers. Good short-term compatibility with particularly sensitive plastics such as polycarbonate and PMMA indicates utility in cleaning of assemblies containing many composite materials. Plastics tested include:

- Acrylic (PMMA)
- Polyethylene
- Polypropylene
- Polycarbonate
- Polyester
- Epoxy
- PET
- Phenolic
- ABS

The comments related to generation of PFIB are a misrepresentation of the 3M hazard communication documents. 3M emphasizes in our hazard communication documents that decomposition products, including PFIB, can be generated from continuous exposure to excessive heat or energy sources such as would exist in an emergency fire situation or equipment failure in a sealed vessel. On this basis, PFIB generation is not a relevant risk to consider for aerosol cleaning applications. 3M commercializes products that are safe for their intended uses.

I hope these additional comments are useful in your assessment.

Sincerely,

A handwritten signature in black ink that reads "Kurt T. Werner".

Kurt T. Werner, DABT
Environmental Affairs Manager
Electronic Markets
3M Center, 224-3N-11
St. Paul, MN 55144



Chemicals Americas, Inc.

October 31, 2007

Dr. Dongmin Luo, Manager
Air Quality and Climate Science Section
Research Division
California Air Resources Board
1001 I Street
Sacramento, California 95812

Subject: Comments on the Environmental Impact Assessment of Selected Halogenated Chemicals (Draft)

Dear Dr. Luo,

AGC Chemicals Americas, Inc. appreciates the opportunity to comment on the Air Resources Board Environmental Impact Assessment of Selected Halogenated Chemicals (Draft) report dated September 20, 2007. We agree with CARB that VOC exemptions will provide a positive economic impact to businesses by providing formulation alternatives. We further agree that effects to water or soils will be low.

We further concur that the substances evaluated in this submission are unreactive, and therefore their approval as VOC-exempted alternatives would not yield a reduction in ground level ozone levels if they are utilized as replacements for HCFC-141b. What is important to understand is that without such approvals, formulators may have to replace 141b with hydrocarbons or materials that are VOC's, which would raise the level of ground level ozone.

We find the values of the Hazard Index interesting, but question that introduction of such values here. This calculation is not found in globally recognized toxicity protocols, or by federally regulated bodies (US E.P.A., UNEP, MITI, etc). We do not support the use of new methodologies without peer review.

We are confused by CARB's decision to approve HFE-7200, when the draft states that "*OEHHA's earlier assessment on HFE-7100 and 7200 states both chemicals are possible carcinogens (OEHHA, 2001)...the findings suggest the need for further studies prior to taking an action which could facilitate increased use*". No data was provided to respond to these findings. Further, CARB implies that this product may be intended for electrical or energized circuitry. Thermal decomposition of this product produces PFIB, a chemical that is fatal in the ppb range. We do not understand the rationale in not addressing this hazard.

We agree that it is proactive to address both Air Quality and GWP issues collectively, as both matters affect the air we breathe. However, limiting VOC exemptions to two materials (Acetone and 7200) does not provide sufficient options for formulators and businesses to meet compliance.

If it is the intent of CARB to write one encompassing regulation, then this would be better addressed with MIR and GWP thresholds for finished formulations. This type of guidance regulation would allow latitude in formulation while meeting specific air quality goals. Therefore we suggest that the VOC issue be evaluated independently of climate change, while a more comprehensive MIR and GWP packet can be created.

We thank you again for allowing us to comment.

Respectfully;

David A. Ferguson
AGC Chemicals Americas, Inc.
229 E. 22nd Street
Bayonne, NJ 07002-5002



Chemicals Americas, Inc.

Monday, February 25, 2008

Robert Fletcher
CARB
1001 I Street
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Sacramento, CA 95812

Dear Robert,

I had the pleasure of hearing your presentation last week at the WAIB/ NAA Aerosol meeting in Dana Point, CA. I am writing to follow up on your slide about the pending action on the Draft of the VOC exemption submissions.

I am requesting that CARB reconsider its decision on HCFC-225ca for its VOC exemption request. On citing the Environmental Impact Assessment of Selected Halogenated Chemicals (Draft) September, 2007; HCFC-225ca has a Global Warming Potential of 122 (Table ES-2) and an atmospheric lifetime of 90 days (Table 2). These values fall within the acceptable range that CARB has set out. Further, it has a MIR value of <0.01 where as HFE-7200 has a MIR value of 0.10; a value 10 times higher. If HCFC-225ca were added to the approved list, this would provide formulators with two diverse avenues in which they could pursue new, innovative solutions to meeting CARB's goals.

In the Draft report, CARB outlines its decision based on a perceived toxicity of this molecule. The US E.P.A., the US Military, and the Japanese Ministry (MITI) have all approved this chemical. This product has been in the global marketplace for 15 years without incident. Therefore we feel that the toxicity of this product is much lower than the details outlined in the draft.

While this product has been on the market for 15 years; its usage is minimal based on two factors; the Montreal Protocol, and its price. The Montreal Protocol states that HCFCs can not be used or formulated into products used in the household. Therefore HCFC-225ca can only be used for Industrial purposes. Second, the pricing of fluorinated solvents is so much higher than hydrocarbons; that formulators and factories only used this product when it serves a purpose that no other product can fulfill.

I submit that the addition of HCFC-225ca is warranted. The product meets the criteria outlined in the Draft dated September 2007. Such an approval would also give industry and additional tool to help it work with CARB in providing viable products to the California marketplace.

Respectfully;

David A. Ferguson
AGC Chemicals Americas.

Raymond Regulatory Resources (3R)

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November 19, 2007, 2007

Dr. Dongmin Luo, Manager
Air Quality and Climate Science Section
Research Division
California Air Resources Board
1001 I Street
Sacramento, California 95812

Subject: Environmental Impact Assessment of Selected Halogenated Chemicals (Draft)

Dear Dongmin,

Raymond Regulatory Resources (3R) appreciates the opportunity to comment on the Air Resources Board Environmental Impact Assessment of Selected Halogenated Chemicals (Draft) Staff report dated September 20, 2007. 3R has been actively working with the ARB on exemptions for HCFC-225 ca & cb, HFC-245fa, HFC-365mfc, and HFC-43-10mee. Therefore, these comments will be limited to those compounds. The primary use of these compounds would be in precision cleaning, especially the area of electronic cleaning.

In reviewing the document 3R has the following comments:

- 2.1 Physical Properties

Concur that in general the HCFC's and HFC are non-flammable. Even though there is an energized electronic cleaner exemption, the current exemption does not adequately protect users from other ignition sources that are in the area and are not being directly sprayed. This further proves the need for non-flammable products. Also, these chemicals are beneficial due to their "flammability masking" effect. Because they are inherently poor solvents, one function of HFC-245fa, HFC-365mfc, HFC-43-10mee and HCFC 225 fluids used in electronic cleaners is frequently to act as an "inerting" agent. By combining precise amounts of one or more of those nonflammable ingredients with proven cleaning fluids that are flammable, the final blend is one that is nonflammable with reliable cleaning performance. Equally important is plastics compatibility as there are many plastic parts on electronic components today. Thus, many of the solvents petitioning for exemption will increase plastics compatibility as well as quench flammability.

- 2.2.1 Atmospheric Chemistry and Reactivity

Concur with the statement that the HCFC's and HFC's do not contribute to tropospheric ozone formation to any significant extent once emitted into the atmosphere.

- 2.2.2 Impacts on Secondary Organic Aerosol

Concur that HCFC's and HFC's will not generate secondary organic aerosol.

- 2.2.3 Impacts on Stratospheric Ozone Depletion

Concur that HFC-245fa, HFC-365mfc and HFC-43-10mee do not contribute to stratospheric ozone depletion. Also, that HCFC-225ca and HCFC-225cb have relatively low ozone depletion potentials.

- 2.2.4 Impact on Climate Change

Disagree with the statement that excluding the HCFC's and HFC's from the VOC definition would likely result in an increase to global warming. When the regulation for electronic cleaner was being developed, an industry survey was completed. CARB Stationary Sources thoroughly evaluated the information of this survey and concluded any increase in global warming compound emissions would be negligible. The reference document released May 7, 2004 Initial Statement Of Reasons For The Proposed Amendments To The California Aerosol Coating Products, Antiperspirants And Deodorants, And Consumer Products Regulations, Test methods 310, And Airborne Toxic Control Measure For Para-Dichlorobenzene Solid Air Fresheners And Toilet/Urinal Care Products in section IX Environmental Impacts, (d) Air Quality Environmental Impacts, (3) Impact on Global Warming (d) Phase-out of Hydrochlorofluorocarbon 141b (HCFC-141b) states:

“Another potential increase in use of global warming compounds would occur as HCFC-141b is phased out due to its propensity to deplete stratospheric ozone. We can not predict how manufacturers of Electrical and Electronic Cleaners will reformulate, once suppliers of HCFC-141b have been depleted. However, some data indicate that likely replacements may be global warming compounds such as HFC-43-10mee, HFC-245fa, HFC-365mfc, in combination with hydrofluoroethers (HFE) 7100 and/or HFE 7200. The global warming potentials of these compounds range from 55 for HFE 7200 to 1,500 for HFC-43-10mee (U.S EPA, 2002a). Again, we can not predict how manufacturers would reformulate, but if all HCFC-141b were replaced with these compounds, there would be an emission increase of 0.22tpd. The actual increase in GWP can not be predicted, however. As always staff will monitor usage through subsequent surveys.

*Staff believes that any increase in global warming compound emissions from the proposed amendments relating to VOC emissions (that can be quantified at this time) would be **negligible** when compared to other sources of anthropogenic global warming compounds in the atmosphere. For example, emissions of CO₂ from fossil fuel combustion represented over 75 percent of global warming-weighted greenhouse gas emissions in 2000 (U.S. EPA, 2002b)*

Also global warming would be reduced, although slightly, by reducing VOC emissions and, thereby, ozone concentrations.

Other proposed amendments relating to the prohibitions on use of TACs should have no or negligible impact on global warming because replacements are VOCs or exempt compounds which are not powerful global warming compounds.

The category of electronic cleaner is extremely small, and any use of the proposed exempt compounds would also be small, therefore ARB's initial conclusion of a negligible emissions increase is correct.

▪ 2.3. Multimedia Impacts

Concur that any impact from these compounds is low.

▪ 2.4 Economic Impact

Concur that exempting the HCFC's and HFC's would have a positive impact on the business community. Flexibility in reformulation is of great benefit to manufacturers to produce more efficient and effective products. Also, the end-user of the product benefit in safer more productive products. Failure to exempt these compounds could lead to less safe and effective products which could negatively effect the economic impact on California business.

▪ 3.1 Substitution

The compounds of Methylene Chloride (MC), perchloroethylene (perc) and trichloroethylene (TCE) are not good candidates to evaluate a substitution analysis. These compounds have been prohibited from use. For Electronic Cleaners and General purpose cleaners the compounds MC, Perc, and TCE have been prohibited from production since December 31, 2005 for Electronic Cleaners and these same chemicals have been prohibited from production in Electrical Cleaners since December 31, 2006. Thus any reformulation for these products would have already been completed. This substitution scenario needs to be replaced with realistic examples.

▪ 5. Conclusion and Recommendation

Concur with the need to provide an alternative for HCFC-141b. Disagree that HFE-7200 is the only option. A limited use exemption for HCFC-225ca, HCFC-225cb, HFC-245fa, HFC-365mfc and HFC-43-10mee for use in electronic cleaners would not cause any adverse environmental impacts and would have a positive economic impact on businesses by providing additional reformulation or substitution alternatives.

In summary, electronic cleaning is a necessary and essential function which needs products that are effective and efficient and safe. This is a category which has very small emissions. There is a need for compounds which are plastic safe, non-flammable, and capable of reducing flammability of other co-solvents. The limited exemption, (with appropriate sales

Dr. Dongmin Luo
November 13, 2007
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controls) of the HCFC's and HFC's will provide the industry with the needed tools to formulate products for use in electronic cleaning. The draft report concludes that the compounds HCFC-225ca, HCFC-225cb, HFC-245fa, HFC-365mfc

and HFC-43-10mee are generally non-flammable, do not contribute to tropospheric ozone formation, do not generate secondary organic aerosol, do not contribute to stratospheric ozone depletion or in the case of HCFC-225ca and cb, have low ozone depletion potential and if exempted would have a positive economic impact on business.

The only point of disagreement is of the impact on global warming. ARB's own document states that if all HCFC-141b was replaced the maximum possible increase would be only 0.22 tpd for both electrical and electronic use, thus the increase would be less for electronic use only. In addition, the document goes on to state that the global warming compounds emissions would be **negligible**.

An exemption is needed for the HCFC's and HFC's for use in electronic cleaner only.

Thank you for your time and consideration on this issue.

Doug Raymond

Raymond Regulatory Resources (3R)

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770-424-4888*



November 20, 2007

Dr. Dongmin Luo, Manager
Air Quality and Climate Science Section
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California Air Resources Board
1001 I Street
Sacramento, California 95812

Subject: Environmental Impact Assessment of Selected Halogenated Chemicals (Draft)

Dear Dr. Luo,

ITW Chemtronics appreciates the opportunity to comment on the Air Resources Board Environmental Impact Assessment of Selected Halogenated Chemicals (Draft) Staff report dated September 20, 2007. ITW Chemtronics is a manufacturer and marketer of precision cleaning products. CARB's decision to exempt or not exempt certain compounds will have an effect on our product formulations. The compounds under consideration, HCFC-225 ca & cb, HFC-245fa, HFC-365mfc and HFC-43-10mee, are currently used in our non-flammable electronic cleaning products. These compounds are used to replace HCFC 141b products because they suppress the flammability of the formulations, do not contribute to tropospheric ozone, and have low or no ozone depletion potential.

In reviewing your document we agree with the staff evaluation on many of the potential impacts from these compounds. Staff has concluded that these compounds do not contribute to ozone formation which is a significant health concern in California. Also, there would be low potential risk to soil and surface waters. Adverse health effects are not anticipated for most of these products, considering the nature of precision cleaning applications and the potential volumes used are small. Lastly, we agree with the staff that the exemption of these compounds would have a positive economic impact by providing additional reformulation alternatives for products used in critical manufacturing and repair operations as well as maintenance of critical infrastructure. Providing effective HCFC 141b replacement products is necessary for the health of many technology-based industries in the state.

*ITW Chemtronics
8125 Cobb Center Drive
Kennesaw, Georgia 30152
770-424-4888*

On one issue we do not agree with CARB staff; electronic cleaners, as the prominent category using these compounds, is an extremely small category of products. Currently, several non-flammable products contain these compounds thus no significant increase would be expected if the exemptions were allowed. As HCFC 141b is completely phased out, these compounds will replace the small number of the remaining HCFC 141b products. Any increase in the amount of HCFC and HFC's used will be negligible.

In conclusion, the compounds HCFC 225, HFC 356mfc, HFC-245fa and HFC-43-10mee should be exempted from the VOC definition because they do not contribute to ground level ozone and would have a positive economic impact on the state. They are also not considered a significant source of global warming due to the small volumes of products that contain these compounds.

Thank you for your time and consideration. Please feel free to e-mail me at smax@chemtronics.com.

Sincerely,
Sue Max



ITW Chemtronics
Regulatory Affairs Manager



November 23, 2007

Dr. Dongmin Luo, Manager
Air Quality and Climate Science Section
Research Division
California Air Resources Board
1001 I Street
Sacramento, California 95812

Subject: Environmental Impact Assessment of Selected Halogenated Chemicals (Draft)

Dear Dongmin,

TechSpray appreciates the opportunity to comment on the Air Resources Board Environmental Impact Assessment of Selected Halogenated Chemicals (Draft) Staff report dated September 20, 2007. The primary use of these compounds would be in precision cleaning, especially the area of electronic cleaning.

In reviewing the document Tech Spray has the following comments. In general the HCFC's and HFC are non-flammable. Also, these chemicals are beneficial due to their "flammability masking" effect. One function of HFC-245fa, HFC-43-10mee and HCFC 225 fluids used in electronic cleaners is frequently to act as an "inerting" agent. By combining precise amounts of one or more of those nonflammable ingredients with proven cleaning fluids that are flammable, the final blend is one that is nonflammable with reliable cleaning performance. Equally important is plastics compatibility as there are many plastic parts on electronic components today. Thus, many of the solvents petitioning for exemption will increase plastics compatibility as well as reducing flammability. HFC-365mfc is a solvent that will increase plastics compatibility.

In today's high tech environment there is a need for numerous formulas to satisfy the end-users needs. To meet this complexity, different components are needed for formulation. The staff concluded that these compounds do not contribute to ground level ozone and would have a positive economic impact by providing businesses with additional reformulation alternatives.

On the issue of Global Warming, we disagree with the staff analysis. If these compounds were exempted for only electronic cleaning, then any increase in global warming would be negligible.

In conclusion, the staff should consider exempting HFC-245fa, HFC-365mfc, HFC-43-10mee from the VOC definition for use in electronic cleaning. These compounds do not contribute ground level ozone and would have a positive economic impact. Thank you for your consideration to this issue and feel free to e-mail me at scook@techspray.com

Sincerely

Steve Cook
Director of Product Technology

November 30, 2007

Via e-mail

Dr. Dongmin Luo, Manager
Air Quality and climate Science Section
Research Division
California Air Resources Board
1001 I Street
Sacramento, California 95812
dluo@arb.ca.gov

Subject: Draft ARB Staff Report Entitled “Environmental Impact Assessment of Selected Halogenated Chemicals”¹

Dear Dr. Luo:

The Consumer Specialty Products Association (CSPA) appreciates the opportunity to comment on the above-referenced draft Air Resources Board (ARB) Staff report dated September 2007. In summary, the draft report presents findings and recommendations on whether to grant exemptions for nine specific halogenated chemicals. The ARB will issue its final report after considering the public comments and making necessary revisions. Ultimately, this report will serve as the basis for revising the definition of the term “volatile organic compound” (VOC) in California’s comprehensive Consumer Products Regulation² and will be included in the ARB’s current rulemaking (*i.e.*, the proposed 2008 Amendments) that will be considered by the Board at its June 2008 meeting.

Several CSPA’s member companies would be directly and adversely impacted if the ARB decides to deny a VOC exemption for hydrofluoroether HFE-7100 (two isomers) and hydrofluorocarbons HFC-245fa, HFC-365mfc and HFC-43-10mee. Since these compounds are nonflammable, they are often used to formulate electrical cleaners and electronic cleaners that require low flammability for some of their various uses. In these products, these HFCs and HFEs serve as replacements for HCGC-141b. Not all HCFC-141b replacement can be accomplished using only HFE-7200, the only solvent recommended for exemption. Therefore, CSPA is requesting a limited exemption for the use of these compounds limited to their use in electrical cleaners and electronic cleaners.

A. Statement of Interest

CSPA is a voluntary, non-profit national trade association representing more than 260 companies engaged in the manufacture, formulation, distribution, and sale of chemical specialties products for household, institutional, commercial and industrial use. CSPA member companies’ wide range of products includes home, lawn and garden pesticides, antimicrobial products, air care products, automotive specialty products, detergents and

¹ The ARB draft staff report is posted at: <http://www.arb.ca.gov/research/reactivity/reactivity.htm>.

² See Cal. Code Regs. Title 17, Subchapter 8.5, Article 4, §§ 94507-94517.

cleaning products, polishes and floor maintenance products, and various types of aerosol products. These products are formulated and packaged in many forms and are generally marketed nationally. CSPA and its member companies are committed to the safe manufacture, distribution, use and disposal of consumer products, and assuring that our products provide the numerous environmental, public health and safety benefits that household and commercial consumers need in California and elsewhere.

CSPA and the consumer products industry has worked cooperatively with the ARB for nearly 20 years to develop numerous regulations controlling the VOC emissions from the use of our products. To date, the ARB has promulgated seven comprehensive sets of regulations that set nearly 200 emission standards affecting more than 80 categories of consumer products. Since 1989, CSPA and the consumer products industry have worked cooperatively with ARB staff to do our part in helping improve California's air quality through reductions in the VOC content of consumer products, while maintaining beneficial and effective products.

The ARB's comprehensive regulations to date have obtained a 50% reduction in VOC emissions from our products while maintaining the ability of our products to provide the significant environmental, public health and safety benefits which consumers require and expect. We believe that this is a very significant accomplishment for both our industry and the ARB. CSPA continues efforts with the ARB to achieve maximum feasible reductions as necessary to attain air quality standards.

B. Discussion

CSPA understands ARB's concerns regarding the use of solvents with high global warming potentials. Indeed, CSPA and the consumer products industry has already been working cooperatively this year with ARB staff to develop and conduct the 2006 Consumer and Commercial Products Survey to collect the data needed to evaluate the use of greenhouse gases in our products and determine what reductions are feasible in the 2008 Amendments to the Consumer Products Regulation that are planned for completion next year.

We are concerned, however, regarding the staff recommendation to deny an exemption for these negligibly-reactive VOCs based primarily on differences in Global Warming Potential. The consumer products industry has been minimizing its use of high-global-warming-potential green house gases, such as hydrofluorocarbons (HFCs) for many years. These compounds are used in only where necessary to meet VOC reduction goals, such as those mandated by the ARB, or to meet important safety goals in products where flammability must be low. A limited exemption for these HFCs and HFEs in the small categories of electrical cleaners and electronic cleaners, where they are replacing the use of HCFC-141b, would not result in any significant increase in high-GWP emissions. We therefore request ARB to grant a limited exemption for the use of these compounds in electrical cleaners and electronic cleaners.

Five years ago, CSPA adopted a set of principles aimed at assuring responsible use of HFCs, and became a Founding Member of a partnership that includes the Alliance for Reasonable Atmospheric Policy, the U.S. Environmental Protection Agency, the United Nations Environmental Programme and the Japan Ministry of Economy, Trade and Industry. This partnership finalized its broad set of principles entitled "Responsible Use Principles for HFCs"

in 2002, an international agreement that limits the use of these propellants.³ The Principles include specific provisions for the responsible use of HFCs as aerosol propellants. Therefore, the U.S. consumer products industry is already committed to strictly limiting its use of HFCs.

The continued use of these compounds is necessary for the production of nonflammable products. By definition, electrical cleaners and electronic cleaners are used to remove oily grime or built-up soils from electrical equipment (*e.g.*, electric motors, electric panels, electric generators) without leaving a conductive residue. In many (if not most) instances, electrical cleaners are used on equipment with live or residual electrical charges. There is a compelling safety reason for ensuring that these products can be formulated with nonflammable compounds to avoid flash fires that have the potential to cause serious burns. Therefore, it is important that these two narrowly-defined categories of products have low flammability and low conductivity characteristics.

If you have any questions, please contact us at (202) 872-8110.

Respectfully submitted,



D. Douglas Fratz
Vice President, Scientific & Technical Affairs



Joseph T. Yost
Director, State Affairs

cc: CSPA Air Quality Committee
Carla Takemoto, ARB, Stationary Source Division

³ The Responsible Use Principles are posted at: <http://www.arap.org/responsible.html>.