

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 51

[EPA-HQ-OAR-2006-0948; FRL8475-7]

RIN 2060-AN75

Air Quality: Revision to Definition of Volatile Organic Compounds – Exclusion of Compounds

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule

SUMMARY: The Environmental Protection Agency (EPA) is proposing to revise EPA's definition of volatile organic compounds (VOCs) for purposes of preparing State implementation plans (SIPs) to attain the national ambient air quality standard for ozone under Title I of the Clean Air Act (Act). This proposed revision would add compounds to the list of compounds excluded from the definition of VOC on the basis that these compounds make a negligible contribution to tropospheric ozone formation. The compounds under consideration are propylene carbonate and dimethyl carbonate. The EPA is inviting comment on an alternative evaluation criteria for exempting one of these compounds (propylene carbonate), methods for tracking changes in the use and emissions of both of these compounds and their potential substitutes, and the potential for health risks that may result from this action.

DATES: Comments must be received on or before **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**,

Public Hearing: If anyone contacts us requesting to speak at a public hearing on or before **[INSERT DATE 15 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**, we will hold a public hearing. Additional information about the hearing would be published in a subsequent Federal Register notice.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2006-0948, by one of the following methods:

- www.regulations.gov. Follow the on-line instructions for submitting comments.
- E-mail: a-and-r Docket@epa.gov.
- Fax: 202-566-9744.
- Mail: Docket ID No. EPA-HQ-OAR-2006-0948, Environmental Protection Agency, Mailcode: 6102T, 1200 Pennsylvania Avenue, Northwest, Washington, DC 20460.
- Hand Delivery: EPA Docket Center, U.S. Environmental Protection Agency, 1301 Constitution Avenue, Northwest, Room: 3334, Mail Code: 2822T, Washington, D.C. 20460, Attention Docket ID No. EPA-HQ-OAR-2006-0948. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA-HQ-OAR-2006-0948. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise

protected through www.regulations.gov, or e-mail. The www.regulations.gov website is an “anonymous access” system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA’s public docket visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>.

Docket: All documents in the docket are listed in the www.regulations.gov index.

Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the Docket ID No. EPA-HQ-OAR-2006-0948, EPA/DC, EPA West, Room 3334, 1301 Constitution Avenue, Northwest, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Docket ID No. EPA-HQ-OAR-2006-0948 is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: William L. Johnson, Office of Air Quality Planning and Standards, Air Quality Strategies and Standards Division, Mail code C539-02, Research Triangle Park, NC 27711, telephone (919) 541-5245.; fax number: 919-541-0824; e-mail address: Johnson.WilliamL@epa.gov.

Public Hearing: To request a public hearing or information pertaining to a public hearing on this document, contact Ms. Pamela S. Long, Air Quality Policy Division, Mail code C504-03, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, telephone (919) 541-0641, facsimile number (919) 541-5509, electronic e-mail address: long.pam@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

You may be an entity potentially affected by this proposed policy change if you use or emit propylene carbonate or dimethyl carbonate. States which have programs to control VOC emissions will also be affected by this proposed change.

Category	Examples of affected entities
Industry	Industries that make and use coatings, adhesives, inks or which perform paint stripping or pesticide application. States that control VOC.
States.....	

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this proposed action. This table lists the types of entities that EPA is now aware of that could potentially be affected by this action.

Other types of entities not listed in the table could also be affected. If you have questions

regarding the applicability of this action to a particular entity, consult the person listed in the preceding FOR FURTHER INFORMATION CONTACT section. This proposed action has no substantial direct effects on industry because it does not impose any new mandates on these entities, but, to the contrary, removes two chemical compounds from the regulatory definition of VOC, and therefore from regulation for Federal purposes.

B. What Should I Consider as I Prepare My Comments for EPA?

1. Submitting CBI. Do not submit this information to EPA through EDOCKET, regulations.gov or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. Send or deliver information identified as CBI only to the following address: Roberto Morales, OAQPS Document Control Officer (C404-02), U.S. EPA, Research Triangle Park, NC 27711, Attention Docket ID No. EPA-HQ-OAR-2006-0948.

2. Tips for Preparing Your Comments. When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).
- Follow directions - The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal

Regulations (CFR) part or section number.

- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

C. How Can I Find Information About a Possible Public Hearing?

Persons interested in presenting oral testimony should contact Ms. Pamela S. Long, New Source Review Group, Air Quality Policy Division (C504-03), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, telephone number (919) 541-0641, at least 2 days in advance of the public hearing. Persons interested in attending the public hearing should also contact Ms. Long to verify the time, date, and location of the hearing. The public hearing will provide interested parties the opportunity to present data, views, or arguments concerning these proposed changes.

D. How is this preamble organized?

The information presented in this preamble is organized as follows:

Outline

I. General Information

- A. Does this Action Apply to Me?
- B. What Should I Consider as I Prepare My Comments for EPA?
- C. How Can I Find Information About a Possible Public Hearing?
- D. How is this preamble organized?

II. Background

- A. Propylene Carbonate
- B. Dimethyl Carbonate

III. Proposed Action

IV. Statutory and Executive Order Reviews

- A. Executive Order 12866: Regulatory Planning and Review
- B. Paperwork Reduction Act
- C. Regulatory Flexibility Act
- D. Unfunded Mandates Reform Act
- E. Executive Order 13132: Federalism
- F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
- G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks
- H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use
- I. National Technology Transfer Advancement Act
- J. Executive Order 12848: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

II. Background

Tropospheric ozone, commonly known as smog, occurs when VOCs and nitrogen oxides (NO_x) react in the atmosphere. Because of the harmful health effects of ozone, EPA and State governments limit the amount of VOCs and NO_x that can be released into the atmosphere. The VOCs are those organic compounds of carbon which form ozone through atmospheric photochemical reactions. Different VOCs have different levels of reactivity -- that is, they do not react to form ozone at the same speed or do not form ozone to the same extent. Some VOCs react slowly, and changes in their emissions have

limited effects on local or regional ozone pollution episodes. It has been EPA's policy that organic compounds with a negligible level of reactivity should be excluded from the regulatory definition of VOC, so as to focus VOC control efforts on compounds that do significantly increase ozone concentrations. The EPA also believes that exempting such compounds creates an incentive for industry to use negligibly reactive compounds in place of more highly reactive compounds that are regulated as VOCs. The EPA lists these negligibly reactive compounds in its regulations (at 40 CFR 51.100(s)) and excludes them from the definition of VOCs.

Since 1977, EPA has used the reactivity of ethane as the threshold for determining negligible reactivity. Compounds that are less reactive than, or equally reactive to, ethane under the assumed conditions may be deemed negligibly reactive. Compounds that are more reactive than ethane continue to be considered reactive VOCs and therefore subject to control requirements. The selection of ethane as the threshold compound was based on a series of smog chamber experiments that underlay the 1977 policy.

In the past, EPA has considered three different metrics to compare the reactivity of a specific compound to that of ethane: (i) the reaction rate constant with the hydroxyl radical (known as k_{OH}), (ii) maximum incremental reactivities (MIR) expressed on a reactivity per gram basis, and (iii) MIR expressed on a reactivity per mole basis. Table 1 presents these three reactivity metrics for ethane and for the two compounds discussed in this proposed rule. Differences between these three metrics are discussed below.

Table 1 - Reactivities of ethane and compounds considered for exemption			
Compound	k_{OH} (cm³/molecule-sec)	MIR (g O₃/mole VOC)	MIR (g O₃/gramVOC)
Ethane	2.4 x 10⁻¹³	9.3	0.31
Propylene carbonate	6.9 x 10⁻¹³	25.5	0.25
Dimethyl carbonate	3.49 x 10⁻¹³	5.31	0.059

Notes:

1. k_{OH} value for ethane is from: R. Atkinson., D. L. Baulch, R. A. Cox, J. N. Crowley, R. F. Hampson, Jr., R. G. Hynes, M. E. Jenkin, J. A. Kerr, M. J. Rossi and J. Troe (2004), Summary of Evaluated Kinetic and Photochemical Data for Atmospheric Chemistry. Web version, 2005 http://www.ibiblio.org/iupac-ki/summary/IUPACsumm_web_March2005.pdf
2. k_{OH} value for propylene carbonate is reported in: W.P.L. Carter, D. Luo, I.L. Malkina, E.C. Tuazon, S.M. Aschmann, and R. Atkinson (July 8, 1996), "Investigation of the Atmospheric Ozone Formation Potential of t-butyl Alcohol, N-Methyl Pyrrolidinone and Propylene Carbonate." University of California - Riverside.
<ftp://ftp.cert.ucr.edu/pub/carter/pubs/arcorpt.pdf>
3. k_{OH} value for dimethyl carbonate is reported in: Y. Katrib, G. Deiber, P. Mirabel, S. LeCalve, C. George, A. Mellouki, and G. Le Bras (2002), "Atmospheric loss processes of dimethyl and diethyl carbonate," J. Atmos. Chem., 43: 151-174.
4. All maximum incremental reactivities or MIR (g O₃/g VOC) values are from: W. P. L. Carter, "Latest VOC Reactivity tabulations for SAPRC-99 Mechanism" (updated 2/5/03) <ftp://ftp.cert.ucr.edu/pub/carter/SAPRC99/r02tab.xls>.
5. MIR (g O₃/mole VOC) values were calculated from the MIR (g O₃/g VOC) values by determining the number of moles per gram of the relevant organic compound.

The k_{OH} is the reaction rate constant of the compound with the OH radical in the air. This reaction is typically the first step in a series of chemical reactions by which a compound breaks down in the air and participates in the ozone forming process. If this step is slow, the compound will likely not form ozone at a very fast rate. The k_{OH} values

have long been used by EPA as a measure of photochemical reactivity and ozone forming activity, and they have been the basis for most of EPA's previous exclusions of negligibly reactive compounds. The k_{OH} metric is inherently molar, i.e., it measures the rate at which molecules react.

The MIR values, both by mole and by mass, are more recently developed measures of photochemical reactivity derived from a computer-based photochemical model. These measures consider the complete ozone forming activity of a compound, not merely the first reaction step. Further explanation of the MIR metric can be found in: W. P. L. Carter, "Development of Ozone Reactivity Scales for Volatile Organic Compositions," *Journal of the Air & Waste Management Association*, Vol 44, 881-899, July 1994.

The MIR values are usually expressed either as grams of ozone formed per mole of VOC (molar basis) or as grams of ozone formed per gram of VOC (mass basis). For comparing the reactivities of two compounds, using the molar MIR values considers an equal number of molecules of the two compounds. Alternatively, using the mass MIR values compares an equal mass of the two compounds, which will involve different numbers of molecules, depending on the relative molecular weights. The molar MIR comparison is consistent with the original smog chamber experiments, which compared equal molar concentrations of individual VOCs, that underlie the original selection of ethane as the threshold compound. It is also consistent with previous reactivity determinations based on inherently molar k_{OH} values. The mass MIR comparison is consistent with how MIR values and other reactivity metrics are applied in reactivity-

based emission limits, specifically the California Air Resources Board rule for aerosol spray paints (see <http://www.arb.ca.gov/consprod/regs/apt.pdf>).

The choice of molar basis versus mass basis is significant. Given the relatively low molecular weight of ethane, use of the mass basis tends to result in more VOCs falling into the “negligibly reactive” class versus the molar basis. This means that, in some cases, a compound might be considered less reactive than ethane and eligible for VOC exemption under the mass basis but not under the molar basis. One of the compounds considered in this proposal falls into this situation, where the molar MIR value is greater than that of ethane, but the mass MIR value is less than that of ethane. This compound is propylene carbonate.

The EPA has considered the choice between a molar or mass basis for the comparison to ethane in past rulemakings and guidance. The design of the VOC exemption policy, including the choice between a mass and mole basis, has been critiqued in the published literature.¹ Most recently, in “Interim Guidance on Control of Volatile Organic Compounds in Ozone State Implementation Plans” published on September 13, 2005 (70 FR 54046), EPA stated:

“...a comparison to ethane on a mass basis strikes the right balance between a threshold that is low enough to capture compounds that significantly affect ozone concentrations and a threshold that is high enough to exempt some compounds that may usefully substitute for more highly reactive compounds. ... When reviewing compounds that have been suggested for VOC exempt status, EPA will continue to compare them to ethane using k_{OH} expressed on a molar basis and MIR values expressed on a mass basis.”

Relying on a comparison of mass MIR values consistent with this guidance, EPA is proposing to revise its definition of VOC at 40 CFR 51.100(s) to add propylene

¹ Basil Dimitriadis, “Scientific Basis of an Improved EPA Policy on Control of Organic Emissions for Ambient Ozone Reduction.” *Journal of the Air & Waste Management Association*, 49:831-838, July 1999.

carbonate and dimethyl carbonate to the list of compounds that are exempt because they are negligibly reactive because they are equal to or less reactive than ethane on a mass basis. For the first of these compounds, EPA is inviting comment on the alternative use of a molar basis for the comparison of these compounds to ethane.

EPA has become aware of revised MIR values posted by Dr. W. P. L. Carter on his web site² as part of a report for the California Air Resources Board (CARB) which indicate changes in the reactivity values of the two compounds being proposed for exemption as well as for that of ethane. In particular, the new data indicate that propylene carbonate has an MIR value that is essentially equal to that of ethane on a gram basis. These new MIR values are shown in Table 2 below:

Table 2 - 2007 Revised MIR values	
Compound	MIR (g O₃/gramVOC)
Ethane	0.26
Propylene carbonate	0.26
Dimethyl carbonate	0.055

EPA understands that these numbers were produced by Carter under a contract with the CARB and are reported in the August 31, 2007 report “Development of the SAPRC-07 Chemical Mechanism and Updated Ozone Reactivity Scales.” CARB will consider this report as part of their investigation of whether MIR values in CARB regulations need to be revised. EPA is not relying on these new MIR values for this proposal, but we do not think the new MIR values would prohibit us from proceeding

² These new MIR values may be found at <http://pah.cert.ucr.edu/~carter/SAPRC/scales07.xls>

with the exemptions because the two compounds being proposed for exemption would still be equal to or less than ethane in reactivity. We invite comments on the whether EPA should use this new data for the VOC exemptions being considered in this notice

The technical rationale for recommending an exemption for each of the individual compounds is given below:

A. Propylene Carbonate

Huntsman Corporation submitted a petition to EPA on July 27, 1999, requesting that propylene carbonate be exempted from VOC control based on its low reactivity relative to ethane.

Propylene carbonate (CAS registry number 108-32-7) is an odorless non-viscous clear liquid with a low vapor pressure (0.023 mm Hg at 20° C) and low evaporation rate compared to many other commonly used organic solvents. It has been used in cosmetics, as an adhesive component in food packaging, as a solvent for plasticizers and synthetic fibers and polymers, and as a solvent for aerial pesticide application.

Huntsman submitted several pieces of information to support its petition, all of which have been added to the docket for this action. One of these pieces of information was "Investigation of the Atmospheric Ozone Formation Potential of t-butyl Alcohol, N-Methyl Pyrrolidinone and Propylene Carbonate" by William P. L. Carter, Dongmin Luo, Irina L. Malkina, Ernesto C. Tuazon, Sara M. Aschmann, and Roger Atkinson, University of California at Riverside, July 8, 1996. Table 8 of that reference lists the MIR for propylene carbonate (on a gram basis) as 1.43 times higher than that of ethane. However, in Table 1 above, EPA has shown a 2003 MIR value that was taken from more

recent 2003 data from Dr. Carter's web site. This 2003 MIR value is lower than that of ethane on a mass basis.

From the data in Table 1, it can be seen that propylene carbonate has a higher k_{OH} value than ethane, meaning that it initially reacts more quickly in the atmosphere than ethane. A molecule of propylene carbonate is also more reactive than a molecule of ethane, as shown by the molar MIR (g O₃/mole VOC) values, since equal numbers of moles have equal numbers of molecules. However, a gram of propylene carbonate is less reactive, or creates less ozone on the day of its emission to the atmosphere, than a gram of ethane. This is because propylene carbonate has a molecular weight (102), which is over three times that of ethane (30), thus requiring less than a third the number of molecules of propylene carbonate to weigh a gram than the number of molecules of ethane needed to weigh a gram.

Based on the mass MIR (g O₃/g VOC) value for propylene carbonate being equal to or less than that of ethane, EPA is proposing to find that propylene carbonate is "negligibly reactive" and therefore exempt for the regulatory definition of VOC at 40 CFR 51.100(s). EPA is inviting comment on whether the comparison of propylene carbonate to ethane should instead be made on the basis of the molar MIR (g O₃/mole VOC) value. In that case, the petition to grant propylene carbonate a status of "negligibly reactive" would be denied.

B. Dimethyl Carbonate

The EPA received a petition from Kowa America Corporation on July 29, 2004 seeking an exemption from the regulatory definition of VOC for dimethyl carbonate.

This petition asserted that dimethyl carbonate (DMC) is less photochemically reactive than ethane and asked for the exemption on that basis.

Dimethyl carbonate (CAS registry number 616-38-6) may be used as a solvent in paints and coatings. The petitioner anticipated that it might be used in waterborne paints and adhesives because it is partially water soluble. It is also used as a methylation and carbonylation agent in organic synthesis. It can be used as a fuel additive.

In support of its petition, the petitioner presented articles which give the k_{OH} and MIR values for the compound shown in Table 1. These articles have been placed in the docket.

As shown in Table 1, DMC has a greater k_{OH} value than ethane, which indicates that DMC will likely initially react more quickly in the atmosphere. However, the MIR values for DMC calculated on either a mass or mole basis are less than that of ethane, which indicates lower reactivity overall. Based on these data, EPA proposes to find that DMC is "negligible reactivity" and therefore exempt from the regulatory definition of VOC at 40 CFR 51.100(s). Because both the mass and molar MIR values of DMC are less than those of ethane, this chemical would meet EPA's exemption criteria under either MIR metric.

III. Proposed Action

This proposed action is based on EPA's review of the material in Docket ID No. EPA-HQ-OAR-2006-0948. The EPA hereby proposes to amend its definition of VOC at 40 CFR 51.100(s) to exclude propylene carbonate and dimethyl carbonate from the regulatory definition of VOC for use in ozone SIPs and ozone controls for purposes of attaining the ozone national ambient air quality standard.

The revised definition will also apply for purposes of any Federal implementation plan for ozone nonattainment areas (see e.g., 40 CFR 52.741(a)(3)). States are not obligated to exclude from control as a VOC those compounds that EPA has found to be negligibly reactive. However, if this action is made final, States should not include these compounds in their VOC emissions inventories for determining reasonable further progress under the Act (e.g., section 182(b)(1)) and may not take credit for controlling these compounds in their ozone control strategy.

Excluding a compound from the regulatory definition of VOC may lead to changes in the amount of the exempt compound used and the types of applications in which the exempt compound is used. Although this proposal has no mandatory reporting requirements, EPA urges States to continue to inventory the emissions of these compounds for use in photochemical modeling. Further, EPA invites comment on methods for tracking the uses and emissions of these two compounds, as well as any more reactive compounds for which these two compounds may substitute.

The EPA believes that the proposed exemptions will help to decrease exposures to ground-level ozone by encouraging the use of exempted negligibly reactive compounds in lieu of VOCs and thereby focusing air quality management programs on VOC emissions that contribute most to ozone formation. Although compounds are defined as negligibly reactive solely on the basis of their contribution to ground-level ozone formation, EPA is interested in evaluating whether the proposed exemptions could increase public health risks if these negligibly reactive compounds were toxic themselves. While EPA does not have information to suggest that the proposed exemptions could

increase health risks due to possible toxicity of the exempted compounds, we invite the public to submit comments and additional information relevant to this issue.

IV. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), this action is a significant regulatory action because it raises novel legal or policy issues. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for review under EO 12866 and any changes made in response to OMB recommendations have been documented in the docket for this action.

B. Paperwork Reduction Act

This action does not contain any information collection requirements subject to OMB review under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. It does not impose any recordkeeping or reporting requirement burden.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply, with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency does not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 USC 601 et seq. requires the identification of potentially adverse impacts of Federal regulations upon small business entities. The Act specifically requires the completion of a RFA analysis in those instances where the regulation would impose a substantial impact on a significant number of small entities. Because this rulemaking imposes no adverse economic impacts, an analysis has not been conducted.

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

After considering the economic impacts of this proposed rule on small entities, I have determined that this action will not have a significant economic impact on a substantial number of small entities. This rule will not impose any requirements on small entities. This rule concerns only the definition of VOC and does not directly regulate any entities. The RFA analysis does not consider impacts on entities which the action in

question does not regulate. See Motor & Equipment Manufacturers Ass'n v. Nichols, 142 F. 3d 449, 467 (D.C. Cir. 1998); United Distribution Cos. v. FERC, 88 F. 3d 1105, 1170 (D.C. Cir. 1996), cert. denied, 520 U.S. 1224 (1997). Pursuant to the provision of 5 U.S.C. 605(b), I hereby certify that the rule will not have an impact on small entities.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of

affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Since this rule is deregulatory in nature and does not impose a mandate upon any source, this rule is not estimated to result in the expenditure by State, local and Tribal governments or the private sector of \$100 million in any 1 year. Therefore, the Agency has not prepared a budgetary impact statement or specifically addressed the selection of the least costly, most cost-effective, or least burdensome alternative. Because small governments will not be significantly or uniquely affected by this rule, the Agency is not required to develop a plan with regard to small governments.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled “Federalism” (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure “meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.” “Policies that have federalism implications” is defined in the Executive Order to include regulations that have “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.”

This action addressing the exemption of two chemical compounds from the VOC definition does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of

government, as specified in Executive Order 13132. This action does not impose any new mandates on State or local governments. Thus, Executive Order 13132 does not apply to this rule. In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA is specifically soliciting comments on this proposed rule from State and local officials.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

Executive Order 13175, entitled “Consultation and Coordination with Indian Tribal Governments” (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure “meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.” “Policies that have tribal implications” is defined in the Executive Order to include regulations that have “substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.”

This rule does not have Tribal implications. It will not have substantial direct effects on Tribal governments, on the relationship between the Federal government and Indian Tribes, or on the distribution of power and responsibilities between the Federal government and Indian Tribes, as specified in Executive Order 13175. Today's action does not have any direct effects on Indian Tribes. Thus, Executive Order 13175 does not apply to this rule. In the spirit of Executive Order 13175, and consistent with EPA policy to promote communications between EPA and Tribal governments, EPA invites comments on the proposed rule from Tribal officials.

G. Executive Order 13045: Protection of Children from Environmental Health and Safety Risks

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This proposed rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

H. Executive Order 13211: Actions that Significantly Affect Energy Supply, Distribution, or Use

This rule is not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. Further, we have concluded that this rule is not likely to have any adverse energy effects.

I. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (“NTTAA”), Public Law 104-113, section 12(d), (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. This rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

Executive Order (EO) 12898 (59 FR 7629 (Feb. 16, 1994)) establishes Federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

The EPA has determined that this proposed rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment. The proposed rule amendment is deregulatory and does allow

relaxation of the control measures on sources. However, this is not expected to lead to increased ozone formation since the compounds being exempted have been determined to have negligible photochemical reactivity.

Air Quality: Revision to Definition of Volatile Organic Compounds – Exclusion of
Compounds
Page 25 of 26

List of Subjects in 40 CFR Part 51

Environmental protection, Administrative practice and procedure, Air pollution control, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: September 25, 2007.

Stephen L. Johnson,
Administrator.

For reasons set forth in the preamble, part 51 of chapter I of title 40 of the Code of Federal Regulations is proposed to be amended as follows:

PART 51-REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS.

1. The authority citation for Part 51, Subpart F, continues to read as follows:

Authority: 42 U.S.C. 7401, 7411, 7412, 7413, 7414, 7470-7479, 7501-7508, 7601, and 7602.

§51.100 – [Amended]

2. Section 51.100 is amended at the end of paragraph (s)(1) introductory text by removing the words “and perfluorocarbon compounds which fall into these classes:” and adding in their place a semi-colon and the words “; propylene carbonate; dimethyl carbonate; and perfluorocarbon compounds which fall into these classes:”.