

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 51

[FRL-7552-2]

RIN 2060-AK37

**Air Quality: Revision to Definition of Volatile Organic
Compounds - Exclusion of 4 Compounds**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This action proposes to revise EPA's definition of volatile organic compounds (VOC) for purposes of preparing State implementation plans (SIPs) to attain the national ambient air quality standards (NAAQS) for ozone under title I of the Clean Air Act (CAA). This proposed revision would add four 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. This revision proposes to modify the definition of VOC to say that:

1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C₃F₇OCH₃) (known as HFE-7000); 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (known as HFE-7500, HFE-s702, T-7145, and L-15381); 1,1,1,2,3,3,3-heptafluoropropane (known as HFC 227ea);

and methyl formate (HCOOCH₃) will not be VOC for purposes of VOC emissions limitations or VOC content requirements,

but will continue to be VOC for purposes of all record keeping, emissions reporting, and inventory requirements which apply to VOC. If you use or produce any of these four compounds and are subject to EPA regulations limiting the use of VOCs in your product, limiting the VOC emissions from your facility, or otherwise controlling your use of VOCs, then you will not count these four compounds as a VOC in determining whether you meet these regulatory obligations. However, emissions from these four compounds will still be subject to reporting requirements that exist for other VOC emissions. This action may also affect whether they are considered as VOC's for State regulatory purposes, depending on whether the State relies on EPA's definition of VOC. As a result, if you are subject to certain Federal regulations limiting emissions of VOCs, your emissions of 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane, or 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane, or 1,1,1,2,3,3,3-heptafluoropropane, or methyl formate, may not be regulated for some purposes.

With this proposed action the EPA is not finalizing a decision on how future petitions will be evaluated. EPA is currently in the process of assessing its VOC policy in general. We intend to publish a future notice inviting public comment on the VOC exemption policy and

the concept of negligible reactivity as part of a broader review of overall policy.

In addition to the above proposed exemptions, we are proposing to make a nomenclature clarification to two previously exempted compounds. We propose to add the nomenclature designations HFE-7100 to 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane (C_4F_9OH) and HFE-7200 to 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($C_4F_9OCH_2H_5$).

DATES: Comments on this proposal must be received by **[insert date 30 days after publication in the Federal Register]**. Requests for a hearing must be submitted by **[insert date 15 days after publication in the Federal Register]**.

ADDRESSES: Comments should be submitted (in duplicate if possible) to: Air and Radiation Docket and Information Center (6102), Attention: Docket No. A-2002-03, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Comments should be strictly limited to the subject matter of this proposal, the scope of which is discussed below.

Public Hearing: If anyone contacts EPA requesting a public hearing, it will be held at Research Triangle Park, NC. Persons wishing to request a public hearing, wanting to attend the hearing or wishing to present oral testimony should notify Mr. David Sanders, Air Quality Strategies and Standards Division (C539-02), U.S.

Environmental Protection Agency, Research Triangle Park, NC 27711, telephone (919) 541-3356. The EPA will publish notice of a hearing, if requested, in the Federal Register. Any hearing will be strictly limited to the subject matter of the proposal, the scope of which is discussed below. The EPA has established a public docket for this action, A-2002-03, which is available for public inspection and copying between 8:30 a.m. and 4:30p.m. Monday through Friday, excluding legal holidays, at EPA's Docket Center, EPA West Building, 1301 Constitution Ave., NW, Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: David Sanders, Office of Air Quality Planning and Standards, Air Quality Strategies and Standards Division (C539-02), Research Triangle Park, NC 27711, phone (919) 541-3356. Interested persons may call Mr. Sanders to see if a hearing will be held and the date and location of any hearing.

SUPPLEMENTARY INFORMATION:

Regulated entities.

Entities potentially affected by this action are those (in the list matrix below) which use and emit VOC as well as States which have programs to control VOC emissions.

This action has no substantial direct effects on the

States or industry because it does not impose any new mandates on these entities but, to the contrary, removes four chemical compounds from regulation as a VOC.

<u>Category</u>	<u>Examples of regulated entities</u>
Industry	Industries that use or make refrigerants, blowing agents, fire suppressants, or solvents
States	States which have regulations to control volatile organic compounds

This matrix lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table have the potential of being regulated.

The four compounds we are proposing to exclude from the definition of VOC all have potential for use as refrigerants, fire suppressants, aerosol propellants, or blowing agents (used in the manufacture of foamed plastic). In addition, all of these compounds, may be used as an alternative to ozone-depleting substances such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs).

Three of the compounds, 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane, 1,1,1,2,3,3,3-heptafluoropropane, and

methyl formate are approved by EPA's Significant New Alternatives Policy (SNAP) program (CAA section 612; 40 CFR part 82, subpart G) as acceptable substitutes for ozone-depleting compounds. The fourth compound, 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane, has not been reviewed under SNAP because it was submitted for use in secondary loop refrigeration systems. Fluids used in these systems are not covered by the SNAP program (62 FR 10700). However, this compound is a member of a larger class of compounds known as hydrofluoroethers (HFEs), and other HFEs have been recognized by SNAP as ODS substitutes.

The EPA uses the SNAP program to identify substitutes for ozone-depleting compounds, evaluate the acceptability of these substitutes, promote the use of those substitutes EPA determines to present lower overall risks to human health and the environment (relative to the class I and class II compounds being replaced, as well as to other substitutes for the same end-use), and prohibit the use of those substitutes found, based on the same comparisons, to increase overall risks. The SNAP program has identified the HFCs as a class of replacement substitutes for CFCs. Because they do not contain chlorine or bromine, they do not deplete the ozone layer. All HFCs have an ozone depletion potential (ODP) of 0 although some HFCs have high global warming potential

(GWP).

In approving methyl formate as an acceptable substitute for CFC's and HCFC's, the EPA's SNAP Program noted that methyl formate is toxic and flammable and should be handled by users with proper precautions. Methyl formate causes irritation to the eyes, skin, and lungs, and at high levels may cause pulmonary damage. However, EPA believes that methyl formate is well regulated by other programs; therefore, exposures to this compound will be below levels of concern. OSHA has established an enforceable occupational exposure limit of 100 ppm as an 8-hr time-weighted average. NIOSH has also established a short-term exposure limit (averaged over 15 mins) of 150 ppm. There is only one supplier of methyl formate in the U.S., and their total production is less than 10 million pounds per year. We estimate that use of methyl formate as an HCFC replacement in the foam sector will be relatively small, reaching 2.5 million pounds between 2008-2010. Although we do not have information on all the possible exposure scenarios to methyl formate, based on information provided by industry, the air concentration levels reached in testing methyl formate as a foam blowing agent have been less than 10 ppm (without ventilation), a concentration well below the occupational exposure limits.

The four compounds will continue to be VOC for

purposes of all record keeping, emissions reporting, and inventory requirements which apply to VOC. The EPA believes that it is important to continue collecting data on new exempt organic compound emissions for the following reasons:

- (a) EPA wants to investigate the possibility that some compounds classified as "negligibly reactive" or which are not defined as VOC for purposes of VOC emissions limitations or VOC content requirements may, in fact, contribute to ozone formation under certain conditions, especially if there are large amounts of such emissions;
- (b) EPA wants to investigate whether significant aggregate emissions of "negligibly reactive" compounds or of compounds which are not defined as VOC for purposes of VOC emissions limitations or VOC content requirements may contribute to multi-day ozone events and to ozone transport;
- (c) EPA believes that in order to have more accurate modeling, it may be necessary to keep track of exempt compound emissions, especially if there are large amounts of such emissions;
- (d) EPA is now in the process of assessing its VOC policy in general, and its VOC exemption policy in particular, and data about the impacts of VOC exemptions on such things as the volume of exempt compound use, the effects of an exemption on ambient ozone conditions, and

the verification of VOC substitution are critical information that can only be obtained through continued record keeping and reporting. We intend to publish a future notice inviting public comment on the VOC exemption policy and the concept of negligible reactivity as part of a broader review of overall policy.

Also, we are proposing to make a nomenclature clarification to two previously exempted compounds. We propose to add the designations HFE-7100 to 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane (C_4F_9OH) and HFE-7200 to 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($C_4F_9OCH_2H_5$). These names are widely accepted alternative designations for the two compounds and can be found in the book titled, Handbook for Critical Cleaning by Barbara Kanegsberg and Edward Kanegsberg, CRC Press, 2001, p. 77.

To determine whether your organization is regulated by this action, you should carefully examine the applicability criteria in §51.100 of title 40 of the Code of Federal Regulations. 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.

I. 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 NOx that can be released into the atmosphere. Volatile organic compounds are those compounds of carbon (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate) which form ozone through atmospheric photochemical reactions. Compounds of carbon (also known as organic compounds) have different levels of reactivity -- that is, they do not react at the same speed or do not form ozone to the same extent. It has been EPA's policy that organic compounds with a negligible level of reactivity need not be regulated to reduce ozone. The EPA determines whether a given organic compound has "negligible" reactivity by comparing the compound's reactivity to the reactivity of ethane. The EPA lists these compounds in its regulations (at 40 CFR 51.100(s)) and excludes them from the definition of VOCs. The chemicals on this list are often called "negligibly reactive" organic compounds.

In 1977, EPA published the "Recommended Policy on Control of Volatile Organic Compounds" (42 FR 35314) which established the basic policy that EPA has used regarding organic chemical photochemical reactivity since that time. In that statement, EPA identified the following four compounds as being of negligible photochemical reactivity and said these should be exempt from regulation under SIPs: methane; ethane; 1,1,1-trichloroethane (methyl chloroform); 1,1,2-trichloro-1,2,2-

trifluoroethane (CFC-113). That policy statement said that as new information becomes available, EPA may periodically revise the list of negligibly reactive compounds to add compounds to or delete them from the list.

The EPA's decision to exempt certain compounds in its 1977 policy was heavily influenced by experimental smog chamber work done earlier in the 1970's. In this experimental work, various compounds were injected into a smog chamber at a molar concentration that was typical of the total molar concentration of VOC in Los Angeles ambient air (4 ppmv). As the compound was allowed to react with NO_x at concentrations of 0.2 ppm, the maximum ozone formed in the chamber was measured. If the compound in the smog chamber did not result in ozone formation of 0.08 ppm (0.08 ppm was the NAAQS for oxidants at that time), it was assumed that emissions of the compound would not cause the oxidant standard to be exceeded. The compound could then be considered to be negligibly reactive. Ethane was the most reactive compound tested that did not cause the 0.08 ozone level in the smog chamber to be met or exceeded. Based on those findings and judgments, EPA designated ethane as negligibly reactive, and ethane became the benchmark VOC species separating reactive from negligibly reactive compounds.

Since 1977, the primary method for comparing the reactivity of a specific compound to that of ethane has been to compare the k_{OH} values for ethane and the specific compound of

interest. The k_{OH} value represents the molar rate constant for reactions between the subject compound (e.g., ethane) and the hydroxyl radical (i.e., COH). This reaction is very important since it is the primary pathway by which most organic compounds initially participate in atmospheric photochemical reaction processes. The EPA has exempted 45 compounds or classes of compounds based on a comparison of k_{OH} values since 1977.

In 1994, in response to a petition to exempt volatile methyl siloxanes, EPA, for the first time, considered a comparison to ethane based on incremental reactivity (IR) metrics (59 FR 50693, October 5, 1994). The use of IR metrics allowed EPA to take into consideration the ozone forming potential of other reactions of the compound in addition to the initial reaction with the hydroxyl radical. Volatile methyl siloxanes proved to be less reactive than ethane both on a per mole and per gram basis. In 1995, EPA considered another compound, acetone, using IR metrics. After considering the IR metrics, EPA exempted acetone based on the fact that acetone was less reactive on the basis of grams of ozone formed per grams of VOC emitted (60 FR 31635, June 16, 1995). Prior to 1994, all exemptions had been based on k_{OH} values. Since 1995, EPA has exempted one additional compound, methyl acetate, based on comparisons of IR metrics. The reactivity of methyl acetate was found to be comparable to or less than that for ethane both under a per gram basis and under a per mole basis.

On February 5, 1999, the Performance Chemicals and Fluid

Division of the 3M Company submitted to EPA a petition requesting that the compound 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane be added to the list of compounds which are considered to be negligibly reactive in the definition of VOC at 40 CFR 51.100(s). The next year on August 21, 2000, the Performance Chemicals and Fluid Division of the 3M Company submitted to EPA a petition requesting that the compound 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane be added to the same list.

Potential uses for these two compounds (and other compounds for consideration under this proposal) are shown in Table 1. In its petition, 3M points out that it has requested the compound 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane be listed as an acceptable substitute for CFCs and hydrochlorofluorocarbons (HCFCs) in certain uses and; as such, use of this substance may mitigate depletion of stratospheric ozone.

Table 1

Potential Uses of Compounds Addressed in this Proposal

<u>Compound</u>	<u>Potential Use</u>
1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane	- refrigerant - aerosol propellant
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane	- refrigerant

1,1,1,2,3,3,3-heptafluoropropane	- fire suppressant - aerosol propellant
methyl formate	- blowing agent

Although 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl)hexane has not been identified as a substitute, specifically, the SNAP program has identified hydrofluoroethers (HFEs), as a class, as replacement substitutes for CFCs.

In support of the 1,1,1,2,2,3,3-heptafluoro-3-methoxypropane and the 3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane petitions, 3M Company supplied information on their respective photochemical reactivities. The 3M Company stated that, as hydrofluoroethers, these compounds are very similar in structure, toxicity, and atmospheric properties to other compounds such as $C_4F_9OCH_3$, $(CH_3)_2CF_2CF_2OCH_3$, $C_4F_9OC_2H_5$, $(CH_3)_2CF_2CF_2OC_2H_5$ which are exempt from the VOC definition.

Other information submitted by 3M Company consists mainly of a peer reviewed article entitled "Atmospheric Chemistry of Some Fluoroethers," Guschin, Molina, Molina: Massachusetts Institute of Technology, May 1998, which has been submitted to the docket. This article discusses a study in which the rate constant for the reaction of the compounds with the hydroxyl (OH) radical is shown to be less than that for ethane and slightly more than for methane. This rate constant (k_{OH} value) is commonly used as one measure of the photochemical reactivity of compounds. The petitioner compared the rate constants with

that of ethane which has already been listed as photochemically negligibly reactive (ethane is the compound with the highest k_{OH} value which is currently regarded as negligibly reactive). The compounds under consideration are listed with their reported k_{OH} rate constants in Table 2 along with that of ethane. The scientific information which the petitioner has submitted in support of the petition has been added to the docket for this rulemaking. This information includes references for the journal articles where the rate constant values are published.

Table 2

Reaction Rate Constants (at 25°C) with OH Radical

<u>Compound</u>	<u>cm³/molecule/sec</u>
ethane	2.4×10^{-13}
n-C ₃ F ₇ OCH ₃	1.2×10^{-14}
HFE-7500	2.2×10^{-14}
HFC-227ea	1.09×10^{-15}
methyl formate	2.27×10^{-13}

Together with 5-day and 28-day inhalation toxicity studies, 3M Company also has included Material Safety Data Sheets indicating both their compounds as having very low toxicity. This information has been placed in the docket.

On February 18, 1998, the Great Lakes Chemical Corporation ("Great Lakes") petitioned EPA for the exclusion of 1,1,1,2,3,3,3-heptafluoropropane (HCF-227ea) from the definition of VOC. The rate constant for the reaction of HFC-227ea with the OH radical was based on studies performed at the

laboratories of Aerodyne Research, Inc. and reported by Nelson, Zahniser, and Kolb in the Geophysical Research Letters., Vol. 20, No. 2, pages 197-200. The rate constant for HFC-227ea as reported in this paper (Table 2) is 1.09×10^{-15} cm³/molecule/sec at 277K (0°C) which places it well under two orders of magnitude below ethane's reactivity.

Great Lakes also claims that HFC-227ea is not an ozone depleting substance. This compound has been approved under EPA's SNAP program as an acceptable substitute for Halon 1301 and Halon 1211 in various fire suppression applications. Also, EPA has determined HFC-227ea to have a GWP at 3800 times that of carbon dioxide, making it a probable substitute for its competitor fire suppressants which have even higher GWPs.

On February 12, 2002, Foam Supplies, Inc. submitted a petition to exclude methyl formate from the definition of VOC. Foam Supplies, Inc. submitted journal articles showing three separate studies measuring methyl formate's rate constant with hydroxyl radicals and compared this to ethane measured in a like manner as a rate constant (cm³/molecule/sec). The highest value tested for methyl formate was that of 2.27×10^{-13} cm³/molecule/sec which is slightly below that of ethane at 2.4×10^{-13} cm³/molecule/sec (shown in Table 2).

Foam Supplies, Inc. also notes that methyl formate has a zero ODP and a very low or zero GWP.

In addition, Foam Supplies, Inc. notes that this compound has been approved under SNAP as an acceptable alternative to

HCFC-141b and HCFC-22 in various blowing agent applications.

Because of the closeness in rate constant values attributed to methyl formate and ethane, in addition to the information on KOH value submitted by the petitioner for methyl formate, EPA has examined further evidence of low reactivity for methyl formate. This evidence, which is desirable when rate constant values are so close (as in the case of methyl formate and ethane), increases the confidence level with which EPA can make a final decision on whether to approve or disapprove of a petition to exempt a compound from the VOC definition. Dr. William P. L. Carter of the University of California at Riverside has published "The SAPRC-99 Chemical Mechanism and Updated VOC Reactivity Scales", (revised 11/29/2000) on his website at:

<http://ftp.cert.ucr.edu/pub/carter/SAPRC99/appndxc.doc>. Appendix C of his report gives maximum incremental reactivity (MIR) values which are another accepted measure of photochemical reactivity. Dr. Carter's MIR values are given in grams ozone per gram of organic compound. Also, it is easy to calculate the MIR on a basis of grams of ozone per mole of organic compound. On either basis, methyl formate has a reactivity less than half that of ethane. Sections of the Carter report showing ethane and methyl formate values have been added to the docket. Also, the data may be seen on this same website belonging to Dr. Carter.

In a similar action related to a petition to exempt tert-

butyl acetate (TBAC) from the VOC definition [64 FR 52731], EPA raised the issue of whether the comparison to ethane should be made on a mass (or gram) basis or a molar basis. In the case of the four compounds considered here, all four are less reactive than ethane on both mass and molar bases and would qualify as negligibly reactive under either test.

While the purpose of exempting negligibly reactive VOCs is to avoid unnecessary regulation that will not help in the attainment of the ozone NAAQS, it is possible that exempting specific compounds from regulation as a VOC could result in significant health risks or other undesirable environmental impacts. EPA has included available information about the toxicity of the four compounds under consideration in the docket. EPA invites public comment on the potential for significant health or environmental risks that may be expected as a result of the proposed exemptions, taking into account the expected uses for the compounds.

II. The EPA Response to the Petitions

For the petitions submitted by the 3M Company, Great Lakes Chemical Corporation, and Foam Supplies, Inc., the data submitted by the petitioners support the contention that the reactivities of the compounds submitted, with respect to reaction with OH radicals in the atmosphere are lower than that of ethane. There is ample evidence in the literature that methyl formate and the halogenated paraffinic VOC, listed above, do not participate in such reactions significantly.

The EPA is responding to the petitions by proposing in this action to add the compounds in Table 3 to the list of compounds appearing in 40 CFR 51.100(s).

Table 3

**Compounds Proposed to be Added to the List of Negligibly
Reactive Compounds**

<u>Compound</u>	<u>Chemical Name or Formula</u>
n-C ₃ F ₇ OCH ₃	1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane
HFE-7500	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane
HFC-227ea	1,1,1,2,3,3,3-heptafluoropropane
methyl formate	HCOOCH ₃

III. Proposed Action

Today's proposed action is based on EPA's review of the material in Docket No. A-2002-03. The EPA hereby proposes to amend its definition of VOC at 40 CFR 51.100(s) to exclude the compounds in Table 3 as VOC for ozone SIP and ozone control purposes. 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 CAA (e.g., section 182(b)(1)) and may not take credit for controlling these compounds in their ozone control strategy.

In prior VOC exemption decisions, EPA has not required continued record keeping and reporting on the use and emissions

of the exempt compounds. However, more current understanding of the complexities of ozone formation suggests that most organic compounds which EPA has exempted as "negligibly reactive" do have some photochemical reactivity, albeit small. EPA is proposing to retain record keeping and reporting requirements for all new exempt organic compound emissions.

IV. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether a regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of this Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligation of recipients thereof; or

(4) raise novel legal or policy issues arising out of

legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is not "significant" because none of the listed criteria apply to this action. Consequently, this action is not submitted to OMB for review under Executive Order 12866.

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 contain 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 proposed 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 today's proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This proposed rule will not impose any requirements on small entities. Today's proposed 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 proposed 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 one 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 proposed 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 proposed action addressing the exemption of four 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 specifically solicits comment 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 proposed 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 specifically solicits additional comment on this 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.

While this proposed rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, EPA has reason to believe that ozone has a disproportionate effect on active children who play outdoors (62 FR 38856; 38859 July 18, 1997). The EPA has not identified any specific studies on whether or to what extent the four above listed chemical compounds affect children's health. The EPA has placed the available data regarding the health effects of these four chemical compounds in docket no. A-2002-03. The EPA invites the public to submit or identify peer-reviewed studies and data, of which EPA may not be aware, that assess results of early life exposure to any of the four above listed chemical

compounds.

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 a significant regulatory action under Executive Order 12866.

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 proposed rulemaking does not involve technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards.

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: August 27, 2003

Marianne Lamont Horinko,
Acting 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 continues to read as follows:

Authority: 42 U.S.C. 7401-7641q

2. Section 51.100 is proposed to be amended by adding paragraph (s)(5) as follows:

§ 51.100 Definitions.

* * * * *

(s) * * *

(5) The following compounds are VOC for purposes of all recordkeeping, emissions reporting, and inventory requirements which apply to VOC, but are not VOC for purposes of VOC emissions limitations or VOC content requirements:

1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane ($n\text{-C}_3\text{F}_7\text{OCH}_3$),
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE-7500),
1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea), and
methyl formate (HCOOCH_3).