

submitted on December 7, 1999. This SIP revision is to remove an Administrative Order and replace it with a federally enforceable State operating permit for Commercial Asphalt's facility located on Red Rock Road in the city of St. Paul. In the final rules section of this **Federal Register**, we are conditionally approving the SIP revision as a direct final rule without prior proposal, because we view this as a noncontroversial revision amendment and anticipate no adverse comments. A detailed rationale for the approval is set forth in the direct final rule. If no adverse comments are received in response to this action, no further activity is contemplated in relation to this proposed rule. If we receive adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rules based on this proposed rule. We will not institute a second comment period on this action. Any parties interested in commenting on this action should do so at this time.

**DATES:** Comments must be received by August 11, 2000.

**ADDRESSES:** Written comments should be sent to: Carlton T. Nash, Chief, Regulations Development Section, Air Programs Branch (AR-18J), EPA Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604-3590.

**FOR FURTHER INFORMATION CONTACT:** Christos Panos, Regulation Development Section (AR-18J), Air Programs Branch, EPA Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353-8328.

**SUPPLEMENTARY INFORMATION:** For additional information, see the Direct Final document which is located in the Rules section of this **Federal Register**. Copies of the request and the EPA's analysis are available for inspection at the above address.

**Authority:** 42 U.S.C. 7401 *et seq.*

Dated: May 24, 2000.

**Francis X. Lyons,**

*Regional Administrator, Region 5.*

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## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 80

[FRL-6732-2]

RIN 2060-AI89

### Regulation of Fuel and Fuel Additives: Reformulated Gasoline Adjustment

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of proposed rulemaking.

**SUMMARY:** This action proposes an adjustment to the VOC performance standard under Phase II of the reformulated federal gasoline (RFG) program for ethanol RFG blends that contain 3.5 weight percent oxygen. For such blends, the proposed adjustment would reduce by 1 percentage point (from a 27.4 to a 26.4 percent reduction in the north, and from a 29 to a 28 percent reduction in the south) the VOC performance standard. We believe that air quality benefits will continue to be similar to the current RFG standards. EPA also solicits comment on adjustment or elimination of the minimum oxygen requirement of 1.5 weight percent.

This action implements the National Research Council (NRC) recommendation that the contribution of CO to ozone formation be recognized in assessments of RFG air quality benefits.

This action also implements recommendations of the Blue Ribbon Panel on Oxygenate Use. One of the panel's recommendations was that EPA take steps to reduce the amount of MTBE used in gasoline. The action proposed today would increase the flexibility available to refiners to formulate RFG without MTBE while still realizing ozone benefits that are similar to those of the current Phase II program.

**DATES:** All public comments must be received on or before September 11, 2000.

**ADDRESSES:** Any person wishing to submit comments should send them (in duplicate, if possible) to the docket address listed below and to Barry Garelick (6406J), Environmental Protection Specialist, U.S. Environmental Protection Agency, Office of Transportation and Air Quality, Transportation and Regional Programs, 1200 Pennsylvania Ave., NW, Washington, DC 20460. Materials relevant to this have been placed in docket [A-99-32] located at U.S. Environmental Protection Agency, Air Docket Section, Room M-1500, 401 M

Street, SW., Washington, DC 20460. The docket is open for public inspection from 8:00 a.m. until 5:30 p.m., Monday through Friday, except on Federal holidays. A reasonable fee may be charged for photocopying services. To request a public hearing, contact Barry Garelick, (202) 564-9028.

**FOR FURTHER INFORMATION CONTACT:** For further information about this proposed rule, contact Barry Garelick, Environmental Protection Specialist, Office of Transportation and Air Quality, Transportation and Regional Programs Division, at (202) 564-9028. To notify EPA of a public hearing request, contact Barry Garelick, (202) 564-9028.

**SUPPLEMENTARY INFORMATION:** The remainder of this proposed rule is organized as follows:

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## I. Statutory Authority

**I. Adjusted VOC Standard Under Phase II of the RFG Program***A. Regulated Entities*

Regulated categories and entities potentially affected by this action include:

Category	Examples of regulated entities
SIC 2911 .....	Refiners, importers, oxygenate producers, and oxygenate blenders of reformulated gasoline.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could be potentially regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether an entity is regulated by this action, one should carefully examine the RFG provisions at 40 CFR Part 80, particularly § 80.41 dealing specifically with the RFG standards. 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.

*B. Background*

The purpose of the RFG program is to improve air quality in certain specified areas of the country by requiring reductions in emissions of ozone forming volatile organic compounds (VOCs) and emissions of toxic air pollutants through the reformulation of gasoline, pursuant to 211(k) of the Clean Air Act (CAA or the Act), as amended. Section 211(k)(10)(D) of the Act mandates that RFG be sold in the nine largest metropolitan areas with the most severe summertime ozone levels, as well as areas that are reclassified to "Severe". When the Sacramento Metropolitan Air Quality Management District was reclassified to "Severe", the number of mandated areas became 10. There will soon be 11 areas since the San Joaquin Valley area of California will be reclassified to "Severe". In addition to the mandatory areas, RFG must also be sold in ozone nonattainment areas that opt into the program.<sup>1</sup> The Act also

<sup>1</sup> *Mandatory areas:* Los Angeles, CA, San Diego, CA, Hartford, CT, New York City (NY-NJ-CT), Philadelphia (PA-NJ-DE-MD), Baltimore, MD, Houston, TX, Chicago (IL-IN-WI), Milwaukee, WI, and Sacramento, CA. *Opt-in areas:* Part or all of CT, DE, DC, KY, MD, MA, MO, NH, NJ, NY, RI, TX, and VA. Kansas City, MO and Kansas City, KS are former nonattainment areas which tried to opt into the program. On January 4, 2000, the U.S. Court of

mandates certain requirements for the RFG program. Section 211(k)(1) directs EPA to issue regulations that:

require the greatest reduction in emissions of ozone forming volatile organic compounds (during the high ozone season) and emissions of toxic air pollutants (during the entire year) achievable through the reformulation of conventional gasoline, taking into consideration the cost of achieving such emission reductions, any nonair-quality and other air-quality related health and environmental impacts and energy requirements.

Section 211(k)(2) includes compositional specifications for reformulated gasoline including a 2.0 weight percent oxygen minimum, a 1.0 volume percent benzene maximum, and a prohibition on heavy metal content. This section also requires emissions from RFG to contain no more oxides of nitrogen (NO<sub>x</sub>) than baseline gasoline emissions. Baseline emissions are the emissions of 1990 model year vehicles operated on a specified baseline gasoline.

Section 211(k)(3) requires RFG to meet the more stringent of either a formula or VOC and toxic air pollutant performance standards. During the initial RFG rulemaking process EPA found the performance standards to be more stringent. The performance standards at 40 CFR 80.41 require specific minimum reductions in emissions of VOC and toxics. For 1995 through 1999, or Phase I of the RFG program, EPA's regulations must require VOC emission and toxic air emission reductions from RFG measured on a mass basis, at least equal to 15 percent of baseline emissions. For the year 2000 and beyond, or Phase II of the RFG program, EPA's regulations must include a VOC and toxics performance standard each of which must be at least equal to a 25 percent reduction from baseline emissions. For the year 2000 and beyond EPA can adjust the performance standard upward or downward taking into account such factors as technical feasibility and cost, but in no case can the reduction be less than 20 percent. EPA also retains the authority in section 211(k)(1) to require greater reductions than these Phase I and II minimums.

Shortly after passage of the CAA Amendments in 1990, EPA entered into a regulatory negotiation with interested parties to develop specific proposals for implementing the RFG program. In

Appeals for the District of Columbia overturned EPA's final rule to allow former nonattainment areas to opt into the RFG program. This decision prohibits EPA from approving the opt-in requests submitted to the Agency on July 28, 1999, by Governors Carnahan and Graves.

August 1991, the negotiating committee recommended a program outline that would form the basis for a notice of proposed rulemaking, addressing emission content standards for Phase I (1995–1999), emission models, certification, enforcement, and other important program elements.

EPA published final regulations on February 16, 1994. The final rule closely followed the consensus outline agreed to by various parties in the negotiated rulemaking process. The final rule also adopted a NO<sub>x</sub> emission reduction performance standard for Phase II RFG, relying on authority under section 211(c)(1)(A).

The regulations provide a method of certification through the complex model, based on fuel characteristics such as oxygen, benzene, aromatics, RVP, sulfur, olefins and the percent of fuel evaporated at 200 and 300 degrees Fahrenheit (E200 and E300, respectively).

Phase II will lead to significant reductions in the emission of the ozone precursors VOC and NO<sub>x</sub>, and the emission of toxic air pollutants. The VOC Phase II performance standard is 29 percent for southern (class B) areas and 27.4 percent for northern (class C) areas, representing approximately an additional 10 percent reduction in VOC emissions beyond the Phase I requirements. The Phase II NO<sub>x</sub> reduction requirement is 6.8 percent, and the toxics reduction requirement is 22 percent.

*C. Need for Action*

## 1. Concerns Relating to Use of MTBE

In the Clean Air Act, Congress specified that RFG contain two percent by weight oxygen. MTBE and ethanol are the two forms of chemical oxygen (or oxygenates) that gasoline producers most commonly use to add oxygen to their gasoline. Refiners and importers decide which oxygenate to use to meet the CAA requirement. MTBE and ethanol have also been used in conventional gasoline, as octane enhancers, since the 1970s.

Many chemicals in gasoline, including MTBE, can end up in groundwater, as a result of releases from storage tanks and other sources. MTBE is highly soluble and travels faster and farther in water than other gasoline components. MTBE has a strong taste and odor, so even small amounts of MTBE in water can make a water supply undrinkable, and significantly impact an area's ability to fully utilize its water resources. At higher levels, MTBE may also pose a risk to human health.

EPA is concerned about the presence of MTBE in ground and surface water. In December 1998, EPA established a panel of independent experts to examine MTBE's performance in gasoline, its presence in water, and alternatives to its use. Panel recommendations made to EPA in July 1999 include:

- Ensure no loss of current air quality benefits from RFG.
- Reduce the use of MTBE, and seek Congressional action to remove the oxygen requirement in RFG.
- Strengthen the nation's water protection programs, including the Underground Storage Tank, Safe Drinking Water, and private well protection programs.

EPA is committed to working with Congress to provide a targeted legislative solution that maintains the air quality benefits of RFG while allowing reductions in the use of MTBE. EPA will also protect water supplies by continuing to enforce the UST requirements and by enhancing remediation programs.

Today's action implements the panel's recommendation that EPA take steps within its authority to reduce the amount of MTBE used in gasoline. This proposed rule could reduce the amount of MTBE refiners use in RFG by increasing the flexibility for refiners to blend ethanol into RFG. It will provide continued assurances for ethanol use in the Midwest and incentives for other areas looking to use ethanol.

On March 20, 2000, the Administration announced legislative principles for protecting drinking water supplies, preserving clean air benefits, and promoting renewable fuels. The following legislative principles taken together as a single package are designed to maintain air quality and enhance water quality protection while preserving the significant role of renewable fuels, most importantly ethanol:

1. Amend the Clean Air Act or provide the authority to significantly reduce or eliminate the use of MTBE;
2. As MTBE use is reduced or eliminated, ensure that air quality gains are not diminished;
3. Replace the existing oxygen requirement contained in the Clean Air Act with a renewable fuel standard for all gasoline.

In addition to today's action, EPA on March 24, 2000, published an Advanced Notice of Intent to Initiate Rulemaking to reduce or eliminate MTBE from gasoline, under Section 6 of the Toxic Substances Control Act (65 FR 16093).

## 2. Summary of Today's Action

EPA proposes to adjust by 1.0 percentage point the Phase II VOC performance standard for reformulated gasoline blends with 10 volume percent ethanol (approximately 3.5 weight percent oxygen). As discussed in Section I.B., section 211(k)(1) of the CAA directs EPA to promulgate regulations that require the greatest reduction in emission of ozone forming VOCs achievable through the reformulation of conventional gasoline. This section also directs EPA, in promulgating such regulations, to consider the cost of achieving such emission reductions and any nonair-quality and other air-quality related health and environmental impacts. With today's action EPA is exercising its discretion to consider cost and other environmental concerns in its implementation of the VOC performance standards.

The current Phase II VOC performance standards (as well as the proposed adjusted standards) require VOC emission reductions greater than those mandated by section 211(k)(3) of the CAA. In promulgating the current VOC standards, EPA exercised both its 211(k)(3) authority (to impose VOC emission reductions of approximately 25% and additional reductions based on technological feasibility and cost), and its 211(k)(1) authority (to require the greatest VOC emission reductions achievable considering cost and various environmental factors).

In light of certain cost and environmental considerations EPA is reevaluating the appropriateness of some of the current VOC emission reduction requirements for certain blends of RFG. The considerations that compel the proposed VOC adjustment include: (1) The incremental cost increase associated with producing Phase II ethanol RFG; (2) the potential for an adverse environmental impact (contamination of groundwater) from use of MTBE, and the interest in increasing the flexibility available to refiners to reformulate without MTBE; and (3) the unlikelihood that today's action will undermine the ozone benefits of the RFG program. For purposes of evaluating these considerations and reaching a decision to undertake today's proposed action, EPA has relied upon several sources, including, a cost study on ethanol RFG blends conducted by the Department of Energy (DOE) at EPA's request;<sup>2</sup> and the

recommendation of the Blue Ribbon Panel on Oxygenate Use. The cost factors related to production of ethanol RFG are discussed in Section I.E, and the Blue Ribbon Panel recommendations are discussed in Section I.C.1.

In proposing this action EPA also recognizes the fact that the oxygen content of gasoline affects the amount of carbon monoxide (CO) emissions from automobiles. The National Research Council recommended that "the contribution of CO to ozone formation should be recognized in assessments of the effects of RFG" in its report "Ozone-forming Potential of Reformulated Gasoline," p. 6, National Academy Press, 1999. Accordingly, today's action considers the ozone benefits of CO emission reductions resulting from the use of oxygenates in the RFG program.

Oxygenates, like ethanol and MTBE, lead to reductions in emissions of CO from 1990 technology cars, the benchmark used for the RFG program. The level of CO reduction is a function of the amount of oxygen in the fuel. MTBE-blended RFG typically contains 2.0 weight percent oxygen. Ethanol, on the other hand, is typically blended in RFG at levels of 10 volume percent which equates to approximately 3.5 weight percent oxygen; thus, the oxygen content in ethanol-blended RFG is typically higher than in MTBE-blended RFG. The CO reduction attributable to the typical ethanol-blended RFG (with 3.5 weight percent oxygen) is therefore greater than that attributable to the typical MTBE blend (with 2.0 weight percent oxygen). The impact of the proposed VOC adjustment on air quality is discussed further in Section I.F.

Refiners that choose to use ethanol to provide 3.5 weight percent oxygen, the maximum allowed under the RFG program, may take advantage of the adjusted VOC standard which applies during the summer ozone season when VOC emissions are controlled in the RFG program. This option may be particularly attractive in the Midwest where state tax incentives combine with federal tax incentives to encourage use of ethanol at the maximum amount permitted by the RFG program.

## 3. Per Gallon Oxygen Minimum

We seek comment on whether we should propose elimination of the per gallon oxygen minimum. We believe such action might provide additional flexibility to refiners in their choice of oxygenates. Elimination of the per

<sup>2</sup> "Transportation Fuels and Efficiency: Estimating Impacts of Phase 2 Gasoline Reformulation on the Value of Ethanol; Scenario Document"; G.R. Hadder, Oak Ridge National

Laboratory; Oak Ridge, Tennessee; March 17, 1999. This document is available in the public docket for this proposed rulemaking.

gallon minimum may allow refiners to use little or no oxygenate during the summer ozone season, thus reducing the modest cost associated with summer ethanol use. Even if refiners that currently use MTBE choose to continue using MTBE during the summer ozone season, and use ethanol during the non-ozone season, the use of MTBE may be significantly reduced.

We request comment on the alternative approach of lowering, rather than removing the oxygen minimum, which would retain the benefits of the requirement while reducing the small potential for any adverse impacts.

#### *D. Volatility Associated With Ethanol RFG Blends*

One way to reduce VOC emissions from gasoline is to reduce the volatility of the gasoline, measured in Reid Vapor Pressure (RVP). EPA expects that the summer RVP levels during Phase II of the RFG program will have to average about 6.7 pounds per square inch (psi) in order for the fuel to meet the VOC performance standard. In Phase I RFG, summer RVP averaged approximately 8.0 psi in the north and 7.0 psi in the south.

When added to gasoline in the amount needed to satisfy the oxygen content requirement of the Act, ethanol raises the RVP of the resulting RFG blend by about 1.4 psi. For an ethanol RFG blend to meet the VOC performance standard, refiners must use a blendstock gasoline with an RVP low enough to offset the increase resulting from adding ethanol. According to a cost study on ethanol RFG blends—conducted by DOE at EPA's request and available in the public docket for this proposed rulemaking,<sup>3</sup> the change in average manufacturing cost of reducing the RVP of blendstock intended for ethanol-blended RFG to a level that ensures compliance with the current Phase II VOC performance standard is approximately \$0.01 per gallon of RFG for refiners currently using ethanol. Based on DOE's modeled 1.4 psi increase, this cost reflects the 1.4 psi RVP reduction necessary to offset the RVP increase associated with ethanol. (DOE's cost impact was derived by comparing the cost of reducing the RVP in Phase I RFG with 10 volume percent ethanol, to the RVP level necessary to comply with the Phase II RFG performance standard for VOC.)

The ethanol industry has raised concerns that any incremental cost associated with using ethanol in Phase II RFG may lead to a switch to the use

of MTBE, because the more stringent VOC standard of Phase II RFG will require a lower RVP blendstock for ethanol blending.

This summer, ethanol appears to be maintaining its market share in the Chicago and Milwaukee RFG programs; however, for the future it is difficult to predict the geographic distribution of specific oxygenates in Phase II with any certainty. Specifically, in March 1998 EPA wrote to several oil companies serving the Midwest to learn their plans for ethanol use in Phase II of the RFG program. EPA contacted companies that supply a major portion of the Chicago and Milwaukee RFG markets. EPA was told that the price of ethanol relative to other oxygenates will be the determining factor in ethanol use in Phase II of the program. One company told EPA it plans refinery modifications of low to moderate cost that will allow continued use of ethanol year-round; other companies said they would evaluate the price of each oxygenate and, if MTBE was less expensive, they would consider using ethanol during the eight month non-ozone season, but MTBE may be their choice during the ozone season.

EPA wishes to ensure the stability of the RFG program in the Midwest and to avoid any significant disincentive for the use of ethanol. EPA also wants to increase the flexibility for refiners currently using MTBE elsewhere in RFG areas to switch to ethanol. Still, it remains of primary importance that Phase II RFG continue to achieve significant reductions in toxics and in ozone precursors, given RFG's key role in states' ozone control strategies.

#### *E. VOC Standard Adjustment*

We are proposing to reduce by 1.0 percent the Phase II VOC standard for ethanol RFG blends containing 10 volume percent ethanol. Phase II RFG would retain the current average VOC standards of 27.4 percent and 29 percent for northern (Class C) and southern (Class B) areas, respectively, and per-gallon standards of 25.9 percent and 27.5 percent for northern and southern areas, respectively. For RFG blends with 10 volume percent ethanol, however, the average VOC standards would be adjusted to 26.4 percent and 28 percent for northern and southern areas, respectively, and the per-gallon standards adjusted to 24.9 percent and 26.5 percent for northern and southern areas, respectively.

EPA intends this adjustment to provide additional flexibility for refiners to produce ethanol-blended RFG. The proposed adjustment to the Phase II VOC standard would work to offset the

incremental costs associated with the production of ethanol-blended RFG that are created by the RVP increase caused by ethanol. Thus, the proposed adjustment would reduce the cost of ethanol blends and provide refiners with additional flexibility.

EPA believes this adjusted VOC standard maintains the air quality benefits of the RFG program while reducing the cost of using ethanol. The increased flexibility the rule would provide for refiners would help refiners reduce the use of MTBE in RFG.

As discussed in Section I.D., the addition of ethanol raises the RVP of gasoline by approximately 1.4 psi. Under the proposal, the adjusted VOC standard would result in an increase of RVP of approximately 0.2 psi for ethanol blends of RFG. We cannot adjust the standard for ethanol-blended RFG to account for the entire RVP impact of ethanol because an increase in RVP of approximately 1.4 psi in the volatility of RFG would result in a complete loss of emission reductions that would be achieved under Phase II, as well as a partial loss of benefits achieved under Phase I.

Even with the proposed adjustment, Phase II RFG will continue to be a strong VOC reduction program and will meet all the requirements of the Clean Air Act. By limiting the adjustment to 1.0 percentage point for ethanol blends, the change in stringency of the VOC standard for ethanol blends is relatively small. This adjustment will still require ethanol RFG blends to achieve significant VOC reductions beyond those required during Phase I of the program. EPA believes this proposal will not undermine the important benefits of Phase II RFG as an ozone control strategy. EPA believes that this level of adjustment will increase flexibility to switch to ethanol and reduce the incentive for refiners to switch to MTBE while maintaining the air quality benefits of the RFG program. EPA's reasons for this belief are discussed in more detail in Section I.F.

EPA requests comment on additional areas of flexibility for implementation and interaction with other emissions control requirements that the public may wish to suggest, and the possible benefits to such flexibility.

#### *F. Evaluation of Air Quality Impacts of the Proposed Rule*

Ethanol blends at 10 volume percent, the typical blending level of ethanol, contain 3.5 percent by weight oxygen in the fuel and achieve significant reductions in CO emissions because the amount of CO reduction increases as oxygen increases. Preliminary emission

<sup>3</sup> Op. Cit.; Hadder, Oak Ridge National Laboratory; Oak Ridge, Tennessee; June 14, 1999.

estimates using version 5b of the Mobile model indicate that at the adjusted VOC level proposed today, the use of RFG with ethanol at 10 volume percent would reduce emissions of CO by approximately 24 tons for every 1 ton increase in VOC emissions associated with the use of those blends. (See the technical support document in the docket (A-99-32) for this rulemaking; document number II.B-2.)

As recognized in a study conducted by the National Research Council (NRC),<sup>4</sup> CO contributes to ozone formation and is present in ambient concentrations due in part to the large volume of CO emissions from mobile sources. There is no dispute that CO emissions contribute to ozone formation. The Urban Airshed Model (UAM) relied on by states in their State Implementation Plan submissions includes inventories of CO emissions as well as VOC and NO<sub>x</sub>. While the role of CO in the formation of ozone is limited when compared to the effect of VOC and NO<sub>x</sub>, the volume of CO emissions from motor vehicles is comparatively large and therefore is not ignored in photochemical modeling demonstrations.

While it is difficult to quantify the overall ozone impact of a specific change in emissions of CO and VOC, clearly a reduction in CO should directionally reduce ozone, and an increase in VOC should directionally increase ozone. The combined impact on ozone of a change in emissions may vary depending on a variety of environmental conditions, including meteorology. However, given that CO does play a role in ozone formation, the relatively large decrease in CO emissions will offset some, if not all, of any potential increase in ozone formation due to the relatively small increase in VOC emissions. (See the technical support document in the docket (A-99-32) for this rulemaking; document number II.B-2.) Thus, EPA is generally confident that the adjusted standard will achieve ozone reductions that are similar to those anticipated from the current standard, and will assure that the Phase II RFG program will continue to achieve the significant environmental benefits for which it was designed. Furthermore, the adjusted standard will achieve the additional environmental benefits associated directly with decreased CO emissions and the benefits associated with the decreased use of MTBE.

In establishing a change of 1.0 percent in the VOC performance standard, EPA's intent is to take a conservative and cautious approach to ensure that RFG will continue to provide the same level of overall benefits as the existing RFG requirements. EPA is soliciting comment, however, on whether the Agency should also consider adjustments to the VOC standard that are less than or greater than 1.0 percentage point.

With respect to adjustments to the VOC standard greater than 1.0 percentage point, the Illinois Environmental Protection Agency (IEPA) submitted to EPA a proposal and supporting analysis which suggests that EPA should allow a VOC adjustment of 3.7 percentage points—approximately equivalent to an increase in RVP of 0.5 psi. (See Docket A-99-32, document file numbers II.D.3, II.D.5 and II.D.6.)

Briefly, IEPA's analysis compares the VOC and CO emissions associated with a "complying fuel" (assuming a RVP of 6.8 psi and an oxygen content of 2.0 percent by weight) to the emissions associated with a fuel having an RVP of 7.3 (representing an increase in RVP of 0.5 psi) and an oxygen content of 3.5 weight percent. Using a relative reactivity analysis, IEPA concluded that the ozone impact of these two fuels would be identical, and that EPA should therefore provide an adjustment that corresponds to an RVP increase of 0.5 psi. Although EPA is not proposing to adopt the approach recommended by IEPA, the Agency requests comments on such an approach.

The IEPA analysis is based primarily on the use of relative reactivity factors. Relative reactivity factors are values for various types of VOCs and CO that represent a predicted amount of ozone formation, expressed as unit mass of ozone per unit mass of VOC or CO.

EPA is not proposing to use a reactivity analysis as the basis for this regulatory action for several reasons. First, the National Research Council did not recommend that EPA do so. In its May 1999 report, NRC stated, "The committee sees no compelling scientific reasons at this time to recommend that fuel certification under the RFG program be evaluated on the basis of the reactivity of the emissions components." Second, in the same report NRC stated, "So-called reactivity factors \* \* \* are often uncertain and of limited utility for comparing similar RFG blends." EPA agrees with the NRC that the reactivity factors that have been developed to date, and were used by IEPA, may not accurately reflect actual photochemical reactivity of various ozone precursors. In recent regulatory

decisions, EPA has expressed these concerns and others related to the use of relative reactivity factors [63 FR 48792, September 11, 1998]. In particular, EPA is concerned that the factors do not represent the wide variation in atmospheric conditions that exist across the country and have a large influence on ozone formation.

While today's proposed rule does incorporate a recognition of the fact that, in general, CO is relatively less reactive than VOCs, EPA agrees with the NRC that it is not possible to precisely identify the relative reactivity of such compounds at this time in a manner that is meaningfully predictive of ambient conditions and that can reliably form the basis of a regulatory program. (see Technical Support Document in Docket A-99-32, document number II.B.-2) EPA is, however, currently participating in an industry/academic/government workgroup whose goal is to identify research needs in the area of VOC reactivity. EPA anticipates that significant research results may be available in a year or possibly longer, which will assist us in any reexamination of our current VOC regulatory policy in selected instances. Until there are more data generated from this process, EPA believes that it may be premature to base any regulation on a precise quantification of the distinctions between reactivities of VOCs. The Agency is interested in and solicits comments on IEPA's approach or other reactivity-based approaches.

As explained earlier in this preamble, EPA believes that an adjustment to the VOC standard greater than 1.0 percentage point risks too great a loss in the mass VOC benefits of Phase II RFG. (See Technical Support Document in docket A-99-32, document number II.B.-2). When evaluated on a mass basis using EPA's complex model, IEPA's approach would result in approximately a 37 percent decrease in the incremental amount of VOC emissions reduced between Phase I and Phase II RFG.

Finally, we are also concerned with the effect of fleet turnover and the potential for reduced CO benefits associated with advances in engine technology which is discussed in further detail in Section I.M of the preamble. For this reason, EPA is soliciting comment on whether EPA should re-evaluate the adjusted VOC performance standard in several years to determine whether the proposed adjustment still makes sense in light of technology advances and fleet turnover. This re-evaluation will also provide EPA the opportunity to assess the ozone impact of this proposal in light of any

<sup>4</sup> "Ozone-Forming Potential of Reformulated Gasoline"; National Research Council; Washington DC; May, 1999.

relevant scientific advances in determining ozone impact.

#### *G. Ozone Reduction Benefit in Areas That Currently Use Ethanol*

In developing the VOC adjustment in today's proposal, EPA believes that it is important to preserve, as much as possible, the ozone benefits of the current Phase II RFG standards. For areas that presently do not use RFG with ethanol as an oxygenate, this action may lead to an increase in ethanol use. If so, there would probably be an increase in the amount of oxygen in the fuel (*i.e.*, oxygen would increase to 3.5 weight percent from a baseline level of 2.1 weight percent). The increase in oxygen would result in an associated decrease in CO emissions and, under this proposal, a slight increase in VOC emissions. We believe that this proposed rule would allow areas switching to ethanol RFG to realize Phase II RFG ozone benefits that are similar to current Phase II benefits.

In areas that presently use RFG with ethanol as the oxygenate (*e.g.*, Chicago and Milwaukee), the oxygen level in the fuel currently averages 3.5 weight percent oxygen. EPA believes that without this rule change and without changes to the Act's oxygen content requirement for RFG, there is some probability that less ethanol (and more MTBE) will be used in these areas. If this occurs, there would be a drop in the oxygen level in the fuel which would result in increases in CO emissions. Thus the CO reduction benefit in the Midwest associated with the use of ethanol RFG (at 3.5 weight percent oxygen) would not be preserved. Today's action is intended to provide additional flexibility to assure that refiners will continue to use ethanol, thus helping to preserve the current CO benefits associated with ethanol RFG. Moreover, as discussed in Section I.K of the preamble (Oxygen Crediting), refiners that take advantage of the adjusted VOC standard would not be allowed to generate oxygen credits for RFG in other areas. This will avoid double counting the benefits of the additional oxygen. If the additional oxygen above 2.0 weight percent in ethanol RFG which results in a reduction in CO in a given area is also used as a credit for a fuel with less than 2.0 weight percent oxygen in other areas, the CO benefit in those areas would be lost. Under this proposal less oxygen credits would be available; therefore, fuel in other areas will need to use more oxygen, which ultimately lowers CO emissions elsewhere.

If we did not expect ethanol use to decline with Phase II RFG, (*i.e.*, the

current 3.5 weight percent oxygen level remains as the baseline), then continued use of RFG with ethanol in light of the proposed VOC adjustment would represent neither an increase in oxygen in the fuel, nor an additional reduction in CO emissions. Such situation raises the question of whether the increase in VOC allowed by the proposed adjusted VOC standard could then be said to result in a lesser ozone benefit. However, when the Phase I RFG program was implemented in 1995, ethanol use, and hence oxygen levels, in the Midwest increased above previous levels. (According to a 1994 survey performed by the American Automobile Manufacturers Association, the average oxygen content of gasoline in the Chicago area was less than 2.0 weight percent.) With the implementation of the Phase I RFG program, gasoline oxygen levels in Chicago and Milwaukee increased to 3.5 weight percent resulting in a decrease in CO emissions. These CO emission reductions were not credited under Phase I of the RFG program. Those uncredited CO reductions have likely resulted in more ozone benefits than would have been realized otherwise.

The National Research Council has recommended that EPA recognize, in the RFG program, the ozone benefits from CO reductions. Accordingly, we believe our consideration in this proposed rule of CO reductions associated with the use of ethanol RFG is appropriate. Although the adjusted VOC increase would, in the worst case, eliminate the additional ozone benefit, the air quality would be no worse in the Midwest than would otherwise be the case under an "unadjusted" VOC standard in Phase II of the program. Moreover, given the assumption that ethanol use would not decline with Phase II RFG, we believe that the nationwide effect of the adjusted VOC standard would not result in an ozone disbenefit. This is because of the reason explained above relating to limitation on use of oxygen credit trading.

Finally, although the increase in VOC is expected to slightly increase air toxics, we are not proposing to adjust the air toxics performance standard. A minimal loss in toxics overcompliance is expected in areas that currently use ethanol as a result of this proposal. Some toxics overcompliance would be lost in areas that switch from MTBE to ethanol; however, we believe the loss, if any, would be modest.

Therefore, EPA believes that the proposed rule would substantially

preserve the air quality goals of the Phase II RFG program.<sup>5</sup>

#### *H. Impact of Proposed Approach on SIPs*

The adjusted VOC standard for ethanol RFG will allow a slight increase in VOC where ethanol blends are used. States are required to meet specific VOC reduction goals in their respective State Implementation Plans (SIPs); specifically the 3.0 percent Rate of Progress (ROP) requirement of Section 182(c)(2)(B)(i). Some states rely on reductions from the RFG program in meeting these goals. EPA has determined that the increased VOC associated with the adjusted VOC standard should not affect states' ROP plans in the near term.

As discussed in Section I.D., current market uncertainty makes it difficult to predict the mix of ethanol and MTBE RFG in any one area. Given such uncertainty, we believe that the increase in VOC resulting from the flexibility proposed today cannot now be adequately quantified; moreover, any increase is likely to be a very small portion of an area's total emissions. Also as discussed in Section I.F above, we believe the reduction in CO associated with ethanol use will substantially preserve the benefits of Phase II RFG.

Therefore, we are proposing at this time that states are not required to account for any potential increase in mass VOC emissions associated with the proposed adjusted performance standard. In time, however, as more data on oxygenate use and distribution becomes available, we intend to consider this issue and assess the impact of any VOC increases on the states' attainment of the ROP goal. Accordingly, we propose to amend the Guidance on the Post-1996 Rate-of-Progress Plan and the Attainment Demonstration" to indicate that states are not required to evaluate whether there will be an increase in mass VOC emissions as a result of adjusted VOC gasoline, for several years. Prior to that time, EPA will begin an evaluation of market conditions with respect to ethanol and MTBE use and decide whether there is sufficient market predictability for state ROP plans to account for any subsequent increases in mass VOC emissions resulting from adjusted VOC gasoline. We solicit comment on this approach and the need

<sup>5</sup> The discussion in this section is limited to the scenario in which the current level of ethanol RFG penetration in Chicago and Milwaukee is maintained. In Section I.H. below we consider the fact that future penetration levels of ethanol RFG in these areas are difficult to quantify, and what effect the VOC adjustment has on state ROP goals.

for any future evaluation. We also solicit comment on the timing and appropriateness of the magnitude of the changes in VOC emissions this rule would have.

### I. Oxygen and Performance Standard Averaging

The regulations under 40 CFR 80.41 provide both "per-gallon standards" and "averaged standards" for performance standards and oxygen content. Therefore, refiners, importers and oxygenate blenders would be able to meet the proposed performance standards by producing ethanol RFG that meets the proposed 26.4 percent performance standard for VOC, on average, as long as on a per gallon basis the ethanol RFG meets a minimum VOC performance standard of 23.4 percent.

The regulations allow refiners to produce fuels that on an average basis achieve the minimum 2.1 weight percent oxygen standard, as well as the VOC performance standard. While the proposed VOC adjustment does not affect oxygen averaging, it does affect how VOC compliance is calculated.

We are therefore proposing a change in the method for determining compliance with VOC performance standards. Under the current regulations, a refiner or importer supplying averaged RFG or reformulated gasoline blendstock for oxygenate blending (RBOB) must calculate compliance with RFG standards according to a procedure described in 40 CFR 80.67 of the regulations. Refiners are required to determine compliance for each portion of gasoline for which standards must be separately achieved, and for each relevant standard. Suppliers must make separate compliance determinations for each VOC control region since different VOC performance standards apply to RFG designated for VOC Control Region 1 (southern or Class B) and VOC Control Region 2 (northern or Class C).

Today's proposed regulation creates an additional set of averaged VOC performance standards applicable to "adjusted VOC gasoline" and RBOB used to make "adjusted VOC gasoline". (As discussed in Section I.K below, we are proposing to define "adjusted VOC gasoline" in 80.40.) Therefore, suppliers could potentially have portions of their RFG/RBOB subject to one of four different standards. Under the procedure currently specified in 80.67, suppliers would have to demonstrate that each of these portions complies separately with the relevant standard.

In order to accommodate the effect of these additional standards on compliance determinations, we are

proposing to alter the calculation procedure in the regulations. With this modification suppliers will not have to separately comply with the non-adjusted and "VOC-adjusted" standards, but will continue to determine compliance by VOC control region.

Section 80.67 requires that a compliance total be calculated as:

$$\text{Compliance total} = \left[ \sum_{i=1}^n V_i \right] \times \text{Std}$$

where  $V_i$  is the volume of gasoline batch  $i$ , Std is the standard for the parameter being evaluated, and  $n$  is the number of batches included in the averaging period.

This compliance total is compared with an actual total which is calculated as:

$$\text{Actual total} = \sum_{i=1}^n (V_i \times \text{parm}_i)$$

For VOCs,  $\text{parm}_i$  is the complex model emissions reduction of gasoline batch  $i$ , and compliance is achieved if the actual total is equal to or greater than the compliance total.

We are proposing for VOC performance compliance calculations that Std be replaced by a volume-weighted average of the two standards applicable to the RFG and RBOB which a supplier designates for a specific VOC control region *i.e.*:

$$\text{Std} = \frac{\text{Std}_u \times \sum_{i=1}^{n_u} VU_i + \text{Std}_a \times \sum_{i=1}^{n_a} VA_i}{\sum_{i=1}^{n_u} VU_i + \sum_{i=1}^{n_a} VA_i}$$

$\text{Std}_u$  and  $\text{Std}_a$  are the "unadjusted" and "adjusted" averaged standards applicable to a VOC control region.  $VU_i$  and  $VA_i$  are the volumes of the batch  $i$  of "unadjusted" and "VOC-adjusted" RFG and RBOB which a supplier designates for that control region, and  $n_u$  and  $n_a$  are the number of batches in each category. We believe that this approach allows the supplier more flexibility in meeting the VOC performance standards without adverse environmental consequence.

We also believe that this approach minimizes the changes to the RFG reporting system procedures necessary to report, compute and verify compliance calculations. (The RFG reporting system is a data collection system through which suppliers report to EPA gasoline properties, emissions performance calculations, volumes and other data necessary to determine compliance with regulations.) We

recognize that reporting parties and "third party" software developers would have to respond to changes in reporting forms and procedures, and thus, that there is a benefit in minimizing changes to the current system. Creating an additional set of VOC performance standards is expected to have some impact on the reporting system regardless of the method of compliance calculations. For example, minor changes in reporting procedures may be necessary in order to unequivocally identify "VOC-adjusted" and "unadjusted" RFG and RBOB batches. However, this proposed change in the VOC compliance calculation procedure would avoid modifications to the VOC Emissions Performance Averaging Report which would be necessary if separate compliance with each VOC standard were still required.

We are soliciting comment on this proposed approach and any alternative compliance calculation approaches. We encourage parties to comment on both the environmental and administrative consequences of these approaches, including reporting and record keeping issues associated with this proposed regulation. Commenters should consider reporting and recordkeeping issues not only with respect to VOC compliance calculations, but with respect to other aspects of this regulation such as oxygen crediting.

### J. Downstream Compliance and Survey Sampling

Theoretically, circumstances might arise where a mixture of two ethanol RFG blends (both of which independently meet the applicable VOC performance standard) results in a sample that does not meet the VOC performance standard, because while one of the fuels qualifies for the adjusted downstream standard, the other does not.

For ethanol-blended RFG, the ethanol is added to reformulated blendstock for oxygenate blending, or RBOB, at the terminal. In areas of the country that currently use ethanol there is not likely to be the same variation in oxygen levels seen with MTBE blends; the RFG will typically contain ethanol in amounts close to 10 volume percent. We base this finding on survey data for summertime RFG which support the expectation that ethanol will be blended at 10 volume percent due to marketing considerations. (The statistical analysis of the survey data has been submitted to the docket for this rulemaking.) For 1999, of 3,295 samples of ethanol RFG, over 90 percent of the samples contain oxygen levels at or close to 3.5 weight percent, which equates to

approximately 10 volume percent ethanol. (Depending on the specific gravity of the gasoline to which the ethanol is added, the various blends near 3.5 weight percent oxygen could theoretically all be 10 volume percent.) Based on industry practice, therefore, we do not believe that there will be a problem related to downstream compliance, but we solicit comment on this issue.

Another "downstream" issue associated with this proposed regulation is the interaction between the adjusted VOC standard and the RFG surveys required by the RFG regulations. Gasoline samples collected from retail stations in an RFG covered area in each one-week survey conducted during the summer ozone season (June 1–September 15) are evaluated for complex model VOC performance. (Covered areas are geographic areas using RFG and are defined in 40 CFR 80.70.) If the survey average VOC reduction for any survey is less than the applicable per-gallon standard for VOC emissions reduction, the covered area fails the VOC survey. (RFG surveys are discussed more fully in sections of this preamble addressing the oxygen minimum.)

This proposed regulation creates an additional set of per-gallon VOC standards potentially applicable to a portion of the RFG in each covered area. Since each individual gasoline sample collected is analyzed for type and amount of oxygenate, it can be determined which of the VOC standards applies to the gasoline in its current state.

The existence of dual standards creates some difficulty in the implementation and enforcement of the survey regulations. It is necessary to collect a sufficiently large number of samples to ensure that precision requirements for estimating parameter averages are met. These required sample sizes are determined in advance of the surveys, and are specified in the survey design plan. Under the current survey scheme there is no way to guarantee that the sample size for each RFG standard group would be sufficient to meet these precision requirements. A survey could be conducted, the samples analyzed and categorized according to the applicable standard, and the average computed for each of the two groups. However, the number of samples falling into each group would not be known in advance of sample collection and analysis.

A more feasible approach to determining survey compliance would be to calculate a VOC standard applicable for each survey by weighting each of the per-gallon standards by the

proportion of samples in that group. For example, suppose 100 samples were collected in a survey in a covered area in VOC Control Region 2, and 70 contained ethanol at 3.5 weight percent oxygen while the remaining 30 did not. The applicable survey requirement would be calculated as  $(0.70)(24.9) + (0.30)(25.9) = 25.2$  percent VOC reduction. We are proposing to change the RFG regulations to incorporate this approach.

#### K. Oxygen Crediting

Refiners and importers are currently able to meet the averaged standard for oxygen through the exchange of credits under 40 CFR 80.67(h). Credits are generated as a result of a refiner producing, or an importer importing, gasoline that on average exceeds the averaged standard for oxygen over the averaging period. An oxygenate blender using the averaged oxygen standard may generate, or use, oxygen credits.

We have considered whether an adverse effect on air quality would occur if refiners or importers that qualify for the adjusted VOC standard (*i.e.*, make an RFG with 10 volume percent ethanol) also exchange oxygen credits under 40 CFR 80.67(h). We believe that there would be a disbenefit to air quality because the oxygen credit would be sold to a refiner making an RFG with an oxygen level less than 2.0 weight percent in the fuel. The additional oxygen that results in a reduction in CO in the 10 volume percent ethanol RFG would be used as a credit for a fuel with less than 2.0 weight percent oxygen. At such lower levels of oxygen, there would be an increase in CO which, as discussed earlier, plays a role in the formation of ozone in the atmosphere.

The adjusted VOC standard proposed today is based on ethanol RFG blends that contain 3.5 weight percent oxygen. We recognize that there may be some refiners or importers that may wish to take advantage of the oxygen credit trading program as it applies to the averaged oxygen standard. (This would be especially true if we were to adopt the elimination of the oxygen minimum requirement which is discussed in Section II of the preamble and on which we are soliciting comment.) Therefore, in order to offer refiners and importers flexibility, we are proposing to allow refiners that make RBOB for blending with 10 volume percent ethanol a choice of complying with the VOC adjusted standard or with the current (non-adjusted) VOC standard by defining "adjusted VOC gasoline" in 80.40. In the revised 80.40 refiners have the choice of designating gasoline with

10 volume percent ethanol as "adjusted VOC gasoline" or not. If they choose not to, the gasoline must comply with the more stringent (*i.e.*, non-adjusted) VOC standard. In this way batches of RFG blends that contribute oxygen above the oxygen standard and which comply with the non-adjusted VOC performance standard may be used by refiners or importers for the purpose of generating oxygen credits. Batches of RFG blends containing 10 volume percent ethanol which comply with the adjusted VOC standard, however, may not generate oxygen credits.

We are proposing to modify 40 CFR 80.67(h) to reflect which ethanol RFG may be used for generating oxygen credits. We solicit comment on this proposal as well as whether we should alternatively consider a requirement that *all* ethanol RFG blends containing 10 volume percent ethanol be ineligible for generating oxygen credits.

Allowing refiners the flexibility to comply with either of the VOC standards for ethanol RFG would require extensive tracking and segregation of the different types of RBOB downstream of the refineries. As discussed in Section I.L. below, we are also proposing to require that the Product Transfer Document designate the type of RBOB and whether it is to be used to make "adjusted VOC gasoline".

#### L. Product Transfer Documentation

Today's action proposes to require that the Product Transfer Document (as specified in 40 CFR 80.77) designate the type of RBOB (*i.e.*, which contains no ethanol, which contains ethanol less than 10 volume percent, or which must contain ethanol at 10 volume percent and which is used to make "adjusted VOC gasoline"). EPA believes that such designation is sufficient to allow tracking of the different types of ethanol blends as well as providing documentation of the VOC standard (*i.e.*, adjusted or non-adjusted) with which a refiner may choose to comply. EPA solicits comment on this change.

We believe that the Product Transfer Document provides a workable solution to tracking the RBOB for ethanol RFG products including requiring refiners to conduct oversight at retail stations receiving that RBOB. If there were sufficient variation in the levels of ethanol used in ethanol RFG blends, such level of oversight might be necessary. As discussed in Section I.J., the industry practice for ethanol RFG is to blend ethanol at 10 volume percent. We are proposing a change in the regulations to exempt from the quality assurance and sampling requirements of

40 CFR 80.69(a)(7) ethanol RFG that qualifies for the adjusted VOC standard. EPA solicits comment on this change.

### M. Future Vehicles

The adjusted VOC standard is premised in part on the expectation that RFG blends containing 10 volume percent ethanol (3.5 weight percent oxygen) will achieve larger reductions in CO emissions than RFG blends with oxygenates at the level of 2.0 weight percent oxygen. It is possible that future vehicles will employ advanced technology that will significantly reduce CO emissions, irrespective of the oxygen content in the fuel, and consequently negate the importance of the impact of gasoline oxygen content on CO emissions.

We expect that we will learn about the CO emissions performance as time passes. We request comment on this issue and on whether (and when) EPA should evaluate the relationship between advanced vehicle emission control technology and the oxygen content of gasoline on CO emissions.

## II. Elimination of Oxygen Minimum Requirement

### A. Background

The Clean Air Act (CAA) section 211(k)(2)(B) requires that reformulated gasoline (RFG) contain 2.0 percent oxygen by weight. Our RFG regulations, in 40 CFR 80.41, specify standards for various fuel parameters, including oxygen content. The regulations provide both "per-gallon standards" and "averaged standards" for each parameter. Refiners, importers and oxygenate blenders may meet the oxygen content requirement by producing RFG which contains at least 2.0 percent oxygen in every gallon, or by producing RFG with 2.1 percent by weight oxygen on average, over the course of a calendar year, as long as no gallon of RFG contains less than 1.5 percent oxygen. This 1.5 percent lower limit is called the "per-gallon minimum".

The CAA section 211(k)(7) requires an oxygen credit program. The averaged standard for oxygen may be met with the help of oxygen credits. Oxygen credits are created when any refiner makes RFG above the 2.1 percent average requirement over the course of a calendar year. Credits may, with certain restrictions, be transferred from one refinery to another, but cannot be used to meet the per-gallon minimum. Thus, some parties may produce RFG with average oxygen content in excess of the standard while others may produce RFG with average oxygen

content below the standard as long as the average oxygen content of all RFG meets the oxygen content standard.

These provisions for compliance on average provide more flexibility to refiners, importers and oxygenate blenders. We recognized when we promulgated the RFG regulations, that allowing for compliance on average as an alternative to adherence to a per-gallon standard could result in some "covered areas" not receiving the same quality of RFG that they would have received without averaging. Therefore, we built into the regulations several mechanisms, described below, to mitigate this potential problem.

The averaged standards for all parameters are numerically more stringent than the per-gallon standards (e.g. for oxygen 2.1 percent vs 2.0 percent). Furthermore, certain of the parameters (oxygen, benzene and volatile organic compound emission performance), have a per-gallon minimum or maximum specification which gasoline producers may not exceed. These limit the amount of gallon to gallon variability that can occur. Since the oxygen per-gallon minimum is set at 1.5 percent, even under the worst-case scenario, the annual average oxygen content in a covered area could not fall below 1.5 percent.

In addition to these safeguards in the standards, EPA's regulations require refiners, importers and oxygenate blenders who choose to comply on average to conduct surveys, as specified in § 80.68. In these surveys, RFG samples are collected at retail gasoline stations within covered areas and analyzed to determine if the RFG supplied to these areas meets certain pass/fail criteria specified in § 80.68. For example, an oxygen survey series failure occurs in a covered area if the annual average oxygen content of the samples in that area is less than 2.0 weight percent. (An oxygen survey series consists of all the one week surveys conducted in a single covered area during a single calendar year.) These surveys measure all the fuel properties necessary to compare the samples with the RFG standards.

Each type of survey failure results in a specific "ratcheting" of a fuel-parameter-averaged standard and/or a minimum/maximum standard, as specified in § 80.41. For example, an oxygen survey series failure results in a tightening of the per gallon minimum by 0.1 percent. The effect of a survey failure even in a single covered area may be wide ranging since, in general, a ratchet will apply to the gasoline sold in any area by all refiners, blenders or

importers that supplied the ratcheted area during the year of the survey failure, and by all refiners, blenders or importers that supply the area while the ratchet is in effect. Oxygen survey series failures have occurred in several covered areas in past years, and consequently, many refiners, importers and blenders are subject to a 1.7 percent per gallon minimum for oxygen, rather than the initial 1.5 percent minimum.

These ratchets correct, over time, any geographic disparities in the quality of RFG that might result from the use of a refinery based average standard. Suppose, for example, that oxygen survey series failures occur in successive years and the oxygen minimum for all suppliers to the failed covered area is ratcheted by another 0.1 percent every time a failure occurs, until the per-gallon minimum is 2.0 percent. Since the minimum oxygen content in each gallon of RFG being supplied to the failed covered area must be at least 2.0 percent, the annual average oxygen content for that area could not be less than 2.0 percent. The ratchets also provide an economic incentive to correct and avoid geographic deficiencies in the quality of RFG. If any RFG standard is incrementally tightened as a result of survey failures for some RFG parameter, it is likely that the cost of compliance with this standard for suppliers will increase. At some point it is likely that it would be economically advantageous to avoid geographic deficiencies and survey failures rather than face further tightening of a standard.

### B. Potential Modifications

We are soliciting comment on removal of the per gallon minimum oxygen requirement applicable to RFG. We believe that removing the minimum would allow refiners, importers and oxygenate blenders more flexibility in meeting the RFG oxygen content requirement, without compromising the air quality benefits attributable to RFG. Eliminating the per-gallon oxygen minimum may cause oxygen levels to fluctuate more with time in any covered area. Consequently, in order to reduce the effect of such fluctuations on the accuracy of the survey estimates, we are also considering a change in the method for calculating the annual oxygen average from survey data. Finally, removing the per-gallon oxygen minimum requirement eliminates the availability of the oxygen minimum as a ratcheting tool in the event of oxygen survey series failures. Therefore, in order to ensure continued effectiveness of the surveys as a tool to correct and avoid geographic disparities in the

quality of RFG, we are also considering whether the requirement for reduction of averaged toxics emissions (per the complex model) should be made more stringent in the event of an oxygen survey series failure.

Removing the RFG per-gallon oxygen minimum would allow refiners, blenders and importers to market some non-oxygenated gasoline in RFG areas—so long as the annual average oxygen content of their RFG is at least 2.1 weight percent. Currently, under § 80.78, there is a prohibition against combining VOC-controlled RFG oxygenated with ethanol with VOC-controlled RFG produced using any other oxygenate during the period January 1 through September 15. We are soliciting comment on whether this prohibition should be extended to the combining of VOC-controlled ethanol RFG with any other VOC-controlled RFG (including RFG blends without oxygen) during the same time period. We are not proposing this change at this time, and will consider all comments in deciding whether to propose such a change in a future rulemaking. These issues are discussed below.

#### *C. Elimination of RFG Oxygen Content Per-Gallon Minimum*

Removal of the per-gallon minimum would allow producers of RFG more flexibility to vary the oxygen content in RFG on a seasonal basis. One foreseeable benefit to suppliers would be the option for suppliers, who might otherwise oxygenate their VOC-controlled RFG with ethanol, to produce a portion of their VOC-controlled RFG without oxygen. Suppliers would thus be able to produce a portion of their VOC-controlled RFG without utilizing the more costly blendstocks necessary to offset the Reid Vapor Pressure (RVP) boost associated with ethanol-blended RFG. The RVP boost from ethanol is not an issue in non VOC-controlled (winter) RFG, and oxygenate usage at sufficiently high levels in winter RFG could ensure that the oxygen content requirement is met on an annual average basis.

Removal of the per-gallon minimum may also facilitate a reduction in the use of methyl tertiary butyl ether (MTBE) in RFG. For example, some refiners who produce ethanol-oxygenated RFG with high levels of oxygen outside of the VOC-control season may elect to use MTBE as an oxygenate during the summer VOC-control season. Under the current regulation, these refiners would have to use enough MTBE during the summer to ensure that both the annual average oxygen requirement and the per-gallon minimum are met. The average level of oxygen needed during

the summer to satisfy the annual average requirement could potentially be below the current per-gallon minimum requirement. Therefore, removal of the per-gallon minimum could reduce the total amount of MTBE that these refiners would need to use.

As discussed in Section I.C., the “Blue Ribbon Panel on Oxygenates in Gasoline”, a panel of experts appointed by the EPA Administrator, has recommended that the use of MTBE should be reduced substantially in order to minimize current and future threats to drinking water.

We do not believe that the elimination of the oxygen per-gallon minimum would diminish the quality of RFG or the benefits attributable to RFG. However, the modifications to the survey and commingling provisions of the existing regulations, described below, will help to prevent or mitigate any potential problems. We recognize that, in addition to preventing geographic disparities in the quality of RFG, the oxygen minimum requirement is a useful tool for detecting the illegal presence of conventional gasoline in RFG areas. Elimination of the oxygen minimum would also eliminate this enforcement tool. However other minimum or maximum standards remain in place and these can be employed to help detect conventional gasoline sold as RFG. We request comment on whether the value of increased flexibility gained by removal of the oxygen minimum sufficiently justifies the loss of this enforcement tool. We are soliciting comment on the environmental and economic consequences of removal of the oxygen minimum.

#### *D. Modification of Method for Calculation of Oxygen Survey Series Average*

The elimination of the oxygen minimum and the proposed adjustment to the VOC standard may cause RFG oxygen levels to fluctuate substantially throughout the year, with the possibility of seasonal trends. Both of these changes may result in different levels of oxygen occurring in VOC-controlled and non VOC-controlled RFG produced by the same refineries and supplied to the same covered areas. Currently, § 80.68 of the RFG regulations specifies that for each covered area, the average oxygen content for all samples from the survey series shall be averaged, and if the annual average is less than 2.00 percent the area fails the survey series. Calculation of an annual oxygen content average in this fashion may produce an inaccurate estimate in a covered area if there is substantial temporal fluctuation

in oxygen levels. The bias may be more pronounced if oxygen levels vary seasonally, since more surveys are conducted during the “summer” (June 1 through September 15) and the number of samples per summer survey is also greater.

We are considering whether the method of calculation for the oxygen survey series average should be changed. A potential modification in procedure would be to:

1. Determine an average for each survey,
2. Average the “summer” and “winter” (January 1 through May 31 and September 16 through December 31) survey averages separately to determine seasonal averages and
3. Weight the seasonal averages to estimate an annual average.

The summer average could be multiplied by 0.468, the winter average by 0.532, and the two terms be summed to estimate an annual average to be compared to the 2.00 percent survey requirement. These weights are already used in the regulations to calculate the annual average toxics emission reduction from toxics survey data.

This change in calculation method should probably be sufficient to reduce the potential for seasonal bias in the survey series estimate of the annual oxygen average. This change would also reduce the effect of scheduling of surveys on survey series outcomes. Although we do not conduct these RFG surveys, we determine when and where they occur. These surveys are multi-purpose; *i.e.*, the same samples collected for determination of compliance with the oxygen requirement are used to determine compliance with other RFG requirements. This concurrent sampling results in more samples being taken in each summer survey in order to satisfy VOC and NO<sub>x</sub> survey precision requirements, and often, in more surveys being done during the summer months in order to effectively assess VOC and NO<sub>x</sub> performance. Thus, our scheduling of surveys is not done with the sole objective of accurately estimating annual average oxygen content.

Under the current calculation method, our scheduling decisions could limit supplier flexibility in meeting the oxygen average and negate the intended benefits of this regulation change. For example, if refiners supplying RFG to a covered area elect to use high levels of oxygen in winter and low levels in summer, each additional summer survey that we schedule for that area is likely to decrease the estimate of the

annual average oxygen content and increase the chance for an oxygen survey series failure. Under the suggested method, scheduling an additional summer survey should not substantially affect the probability of oxygen survey series failure.

At this time, we are also inviting comment on changes in the method for calculating the average for toxics, benzene and non-ozone season NO<sub>x</sub> survey series from an "average of all samples" method to an "average of survey averages" method. These changes are consistent with the methodology that we are considering for calculating the seasonal oxygen averages. We do not expect that these changes would have any substantial interaction with either the adjusted VOC standard or removal of the oxygen minimum provisions. The technical rationale for these changes is discussed in detail in the original proposal.<sup>6</sup>

In summary, we are soliciting comment on whether survey calculation procedures should be changed if the oxygen minimum is removed, and if so, whether our suggested approach is the most appropriate way to do this.

#### *E. Modification to Provision for Effect of Oxygen Survey Series Failure*

Generally, we recognize that removing the oxygen minimum might increase the likelihood of area-to-area variability in the oxygen content of RFG. Of particular concern is the potential for any substantial reduction of the quality of RFG in any covered area. The required RFG surveys and resultant ratchets for survey failures are the primary mechanism for correcting or avoiding such a situation. These surveys assess the quality of RFG with respect to both fuel property standards (*i.e.*, oxygen and benzene content) and performance standards (*i.e.*, complex model VOC, toxics and NO<sub>x</sub> emissions reductions).

As stated earlier, a specific ratchet is prescribed in the regulations for each type of survey failure, and a failure for a given parameter results in a ratchet of that parameter. In the absence of an oxygen minimum requirement, we believe that ratcheting of the average toxics performance requirement in response to an oxygen survey series failure is appropriate.

The exact role that oxygenates play in RFG toxics emissions performance is difficult to quantify. The complex model indicates that as oxygen content increases while other fuel properties are held constant, the toxics emissions performance of gasoline may increase or decrease, depending on the amount and

type of oxygenate and values of other fuel properties. However, the relationship between toxics performance and oxygen in RFG is influenced by other factors. For example, oxygenates are a high octane blending component in RFG. Producing RFG with less oxygen or no oxygen requires adjusting the "recipe" to provide an alternate source for the volume and octane which the oxygenate provided.

One potential oxygen/octane replacement strategy is the use of reformate, a blending component which contains high-octane aromatic compounds. Increasing the aromatics content in gasoline increases emissions of toxics air pollutants, and this effect is incorporated into the complex model. We recognize that reducing or eliminating the oxygen content in an RFG recipe would not necessarily result in poorer toxics performance. For example, lost volume and octane content could be made up by increasing the use of alkylates, another potentially available refinery blending stream. Alkylates are a good octane source, and an increase in alkylate content in the recipe would not result in poorer toxics emissions performance. While the complex model does predict that total toxics emissions increase somewhat with oxygen removal, independent of what is used as a replacement, this effect can be offset by relatively small changes in other fuel properties with greater influence on toxics emissions.

However, U.S. refiners have far greater capacity to produce reformate than they do to produce alkylate and, thus, it is likely that the removal of oxygen from RFG batches below the current minimum would tend to result in an upward pressure on the use of aromatics. Therefore, EPA's suggestion to ratchet the toxics performance standard in the event of an oxygen survey series failure, is based on a reasonable expectation that inadequate use of oxygen will generally result in an increase in toxic air emissions. Accordingly, the risk of a more stringent "ratcheted" toxics standard would provide incentive to avoid risking an oxygen survey failure.

In summary, removing the oxygen per-gallon minimum would not necessarily lead to average oxygen content deficiencies, or to poorer average toxics emissions performance in any covered area, but the potential for such occurrences exists. Therefore, we are requesting comment on whether ratchets to the average toxics standard in response to oxygen survey failure would be an appropriate mechanism to address this concern.

This toxics ratchet would provide an economic incentive to avoid and correct average oxygen content deficiencies in any covered area, as well as a means to mitigate the possible environmental consequence of such deficiencies. The specific toxics ratchet suggested in the event of an oxygen survey series failure is the same as that currently prescribed for a toxics emissions performance survey series failure—*i.e.*, the complex model toxics emissions reduction requirement for that covered area beginning in the year following the failure is made more stringent by increasing the average toxics emissions reduction standard by an additional 1.0 percent.

The RFG regulations provide enforcement exemptions for Federal RFG sold in California. While most survey requirements do not apply in California, Section 80.81 of the regulations, which addresses these enforcement exemptions, contains a provision for oxygen surveys in Federal RFG areas in California.

We are suggesting that the 1.0% ratchet of the average toxics emissions reduction standard apply, as well, in the event of a California oxygen survey series failure. We are also soliciting comments on possible alternatives to a toxics ratchet.

#### *F. Modification to the Commingling Prohibition*

The regulations, in § 80.78(a)(8), currently prohibit the commingling of VOC-controlled RFG oxygenated with ethanol with VOC-controlled RFG produced using any other oxygenate during the period January 1 through September 15. The rationale for this prohibition is the RVP boost associated with ethanol. For example, the RVP resulting from mixing equal volumes of a 7 psi ethanol-oxygenated RFG blend and a 7 psi ether-oxygenated RFG blend would be greater than 7 psi. The RVP resulting from mixing two 7 psi ether-oxygenated RFG blends or two ethanol-oxygenated RFG blends would not be greater than 7 psi.

When an ethanol-oxygenated blend is mixed with an ether-oxygenated blend the commingled blend is likely to have a VOC emissions performance worse than the average of the VOC performance of the two original RFG formulations. Since commingling can reduce the effectiveness of RFG to control VOC emissions, it is prohibited. This RVP boost will also occur when RFG oxygenated with ethanol is mixed with a non-oxygenated gasoline, and removal of the oxygen minimum would produce situations where non-oxygenated RFG is permissible.

<sup>6</sup> 62 FR 37351 (July 11, 1997).

Therefore, in order to prevent reduced VOC control effectiveness, we request comment on whether an elimination of the oxygen minimum should include an extension of the commingling prohibition to combinations of VOC-controlled ethanol-oxygenated RFG with any other VOC-controlled RFG during the January 1 to September 15 time period. We also are soliciting comment on the adequacy of this approach to addressing commingling issues associated with removal of the oxygen minimum.

Based upon discussions EPA has had with refiners and representatives of the ethanol industry, we are considering whether it is advisable to change the dates during which the commingling prohibition is in effect. Under the current regulation, it is in effect from January 1 through September 15. Refiners and ethanol supporters are questioning why the period begins in January and suggest that it begin in April. The prohibition ends on September 15 because that is the end of the ozone season; during the three and a half months after that date, refiners and terminals can clear out the VOC controlled RFG. The prohibition begins in January because we have evidence that some refiners may begin production of VOC controlled RFG as early as January.

We understand that in terms of seasonal switching of RFG (*i.e.*, from wintertime non-VOC controlled RFG to summertime VOC controlled RFG) there is difficulty in product turnover at some terminals and the requirement to segregate VOC controlled RFG from non-VOC controlled RFG may present difficulties. This segregation requirement is not, however, part of the commingling prohibition. Therefore we would like to know what disadvantage the starting date of January 1 represents with respect to the commingling prohibition, as well as what advantages a starting date of April 1 would provide.

G. Effect on Air Toxics

Elimination of the oxygen minimum is likely to have some impact on toxics

emissions. The magnitude of the impact is uncertain for a number of reasons. Most fundamentally, there is uncertainty about how, where and to what extent the elimination of the oxygen minimum will result in seasonal trends in oxygen usage. Consequently, it is impossible to predict with any accuracy the overall impact of this potential change on RFG toxics performance. However, it is possible to examine, and to some degree quantify, changes in RFG toxics performance that could occur under certain scenarios.

Some background information is necessary in order to understand the relationship between this rule and toxics emissions. RFG standards include a performance standard for toxics. The complex model calculates total toxics performance by separately calculating performance for five toxic air pollutants; benzene, acetaldehyde, formaldehyde, 1,3 butadiene and polycyclic organic matter (POM), and summing the results. The equations in the model which estimate the various toxics pollutants are a function of multiple fuel parameters, including oxygen. Oxygen is not the most influential parameter on toxics performance. Variations in other parameters, such as benzene, over the range of values that normally occur in RFG have a much greater effect on total toxics emissions. Some of the toxics equations are not oxygenate-specific, while others are. For example, the higher emitter exhaust benzene equation contains a term for oxygen weight percent, and as oxygen content increases, all else being constant, benzene emissions decrease. On the other hand, the formaldehyde equations have a term for oxygen from MTBE only, and as MTBE oxygen increases formaldehyde emissions increase. The acetaldehyde equations include a term for oxygen from ethanol, and as ethanol oxygen increases acetaldehyde emissions increase. The complex model treats all of the constituent toxics equally on a mass basis even though these toxics may have different cancer potencies and pose significantly different cancer risk.

As a result of these complex model characteristics, the model predicts that, as MTBE oxygen increases from zero, all else being constant, total toxics emissions will decrease. The model also predicts that an ethanol-oxygenated gasoline will have higher total toxics emissions than an otherwise identical MTBE-oxygenated gasoline with the same weight percent oxygen. Additionally, as ethanol oxygen increases from zero, all else being constant, total toxics emissions will decrease to a minimum and begin to increase again. However, the total toxics emissions at 3.5% oxygen (approximately 10 volume percent ethanol) would still be lower than the total toxics emissions at zero oxygen.

Consequently, since this rule may facilitate changes in both the type and amount of oxygenate used, there is a potential for some adverse impact on total toxics emissions. In order to get a sense of the magnitude of this impact, we have provided results from several complex model runs where the type and amount of oxygen is varied while other parameters are held constant. All model runs were done with the Phase II complex model, which is applicable beginning in 2000. However, rather than choose a hypothetical "recipe" (set of complex model fuel parameters) meeting Phase II requirements, we have fixed the non-oxygen fuel parameters at summer and winter seasonal average levels for Phase I RFG, based on 1998 RFG surveys from areas which used little or no ethanol (the summer season is June 1–September 15 and winter is the rest of the year). In order to provide a single set of numbers for each oxygenate scenario, we have combined summer and winter results from each complex model run using the weights 0.468 for summer and 0.532 for winter. (These are the weights specified in the RFG regulations for calculating annual survey series toxics averages, and suggested for calculation of the annual survey series oxygen averages.) Toxics results from these complex model runs are summarized in the following table:

	MTBE – 2% oxygen		Ethanol 3.5% oxygen		Ethanol 0%/3.5%	% change	WMTBE 1%/Eth. 3.5%/W	
	mg/mi	% change	mg/mi	% change			mg/mi	% change
					mg/mi			
Exhaust benzene .....	40.64	– 38.82	37.66	– 43.31	40.54	– 37.93	39.62	– 39.65
Nonexhaust benzene .....	0.76	– 32.95	0.83	– 31.74	0.83	– 31.74	0.80	– 32.35
Acetaldehyde .....	5.35	– 9.72	13.74	131.75	10.92	68.33	10.85	66.74
Formaldehyde .....	14.43	13.22	13.16	3.22	13.16	3.22	13.38	5.47
Butadiene .....	11.10	– 11.79	10.59	– 15.89	11.07	– 10.71	10.92	– 12.30
POM .....	3.46	– 9.89	3.44	– 10.38	3.46	– 9.86	3.46	– 10.01
Total exhaust toxics .....	74.99	– 26.25	78.59	– 22.77	79.15	– 22.06	78.22	– 23.22
Total toxics .....	75.75	– 27.57	79.42	– 24.11	79.98	– 23.44	79.02	– 24.57

The "MTBE-2% oxygen" case represents MTBE usage at a 2% by weight oxygen level in both summer and winter. This level of oxygen satisfies the regulatory requirement, and oxygen usage at this level, with little seasonal fluctuation, is typical of Phase I ether-oxygenated RFG. The "Ethanol 3.5% oxygen" case represents ethanol usage at a 3.5% by weight oxygen level in both summer and winter. This level of oxygen usage, with little seasonal fluctuation, is typical of ethanol-oxygenated Phase I RFG. The "Ethanol 0% S/3.5% W" case represents no oxygen usage during the summer and ethanol usage at 3.5% during the winter. This oxygenate usage pattern could occur, or be approached, if the oxygen minimum requirement were removed. The "MTBE 1% S/Eth. 3.5% W" case represents MTBE usage at 1% by weight oxygen during the summer and ethanol usage at 3.5% during the winter. This oxygenate usage pattern could occur if the 1.5% minimum were removed and suppliers elect to use MTBE during the summer. Suppliers who elect to comply with the "averaged" oxygen standard must use sufficient oxygen to ensure volume-weighted compliance with this standard. Given the possibility of a toxics ratchet, suppliers are also likely to use sufficient oxygen to avoid survey series failure. If the seasonal weighting factors suggested for calculation of the oxygen survey series average are applied to this case, the annual oxygen level is about 2.3 weight percent, sufficient to provide compliance, with some margin, with the 2.0 percent survey standard. The columns labeled "mg/mi" and "% change" represent complex model emission estimates in milligrams per mile and as a % change from "baseline" emissions, with a negative number indicating a reduction from baseline. All complex model emissions estimates are referenced to 1990 technology vehicles and a statutory baseline fuel "recipe". While the parameters for these model runs were derived from Phase I RFG data, all cases complied with the 21.5% reduction Phase II "averaged" toxics performance standard. We acknowledge that this analysis does not attempt to account for effects resulting from substituting other blending components to replace the volume and octane lost with oxygenate removal. The intent of this analysis is to illustrate the direct effect of oxygen on complex model toxics emissions and the toxics emission performance issue associated with elimination of the oxygen minimum.

It is apparent from the above table that the "MTBE-2% oxygen" case has superior total toxics emissions to any of

the other cases. However, on an individual toxics basis the MTBE case is not always superior. Exhaust benzene, formaldehyde and 1,3 butadiene emissions from the other cases are, on a milligram per mile basis, at least slightly lower than comparable emissions from the "MTBE-2%" case. The higher total toxics emissions with ethanol blends result primarily from higher acetaldehyde emissions. It should also be noted that the difference in total toxics emissions between the two ethanol cases is substantially smaller than the difference in toxics emissions between the MTBE case and the "Ethanol 3.5% oxygen" case. Consequently, the adverse impact, if any, of oxygen minimum elimination on total toxics emissions in a market already using ethanol is likely to be small. A larger adverse toxics impact could occur in a market switching from MTBE to ethanol. However most of this impact would be attributable to the switch in oxygenate type rather than to any change in seasonal oxygen usage. Thus, the incremental "total toxics" penalty resulting from the removal of the oxygen minimum is likely to be much less than the "total toxics" penalty resulting from a switch from MTBE to ethanol, assuming such a switch were to occur.

In summary, there are air toxics trade-offs associated with changes in oxygenate usage. At this time, the impact of an elimination of the oxygen minimum on oxygenate use and distribution and, hence, toxics emissions performance is uncertain. However, were EPA to implement such a change, the RFG surveys will provide a substantial amount of data to evaluate these impacts. Therefore, we are soliciting comment on the effects that this approach may have on toxic air emissions and, consequently on the benefits or dis-benefits of this approach with respect to air toxics. We also request comment on alternative regulatory approaches, such as lowering, rather than removing the oxygen minimum, which may provide some of the benefits of this regulation while mitigating some adverse impacts.

#### H. Effect on CO Emissions

Section I of the preamble which addresses the adjusted VOC standard, points out that the ozone impacts of the slight increase in VOC associated with the adjusted standard are likely to be generally offset by the reduction in CO emissions resulting from the higher level of oxygen in the fuel, since CO plays a role in the formation of ozone in the atmosphere. The CO decrease associated with higher oxygen levels

raises the question of what the effect might be on air quality if gasoline with zero oxygen is used in the summertime. Specifically, elimination of the oxygen minimum could result in some amount of gasoline with zero oxygen in the summer months, and a relative increase in CO emissions associated with such fuel.

We believe that the unpredictability of ethanol RFG distribution identified in Section I.D and I.H also applies with respect to the distribution of gasoline with zero oxygen during the summer months in any given geographic region. As discussed in I.F, we believe that the increase in VOC emissions resulting from utilization of the adjusted VOC standard cannot be adequately quantified at this time and any increase is likely to be a very small portion of an area's total VOC emissions.

We believe the same to be true with respect to predicting the likelihood of increased CO emissions resulting from the presence of zero-oxygen RFG during the summer months. That is, the increase in CO emissions resulting from zero oxygen RFG during the summer months in any given region cannot be adequately predicted or quantified at this time. We believe that such increases are likely to be a very small portion of an area's total CO emissions and thus would likely have a negligible effect on ambient ozone.

Therefore we request comment on whether EPA should evaluate the need to re-evaluate the distribution of zero oxygen RFG in the summer months at some time after a rulemaking to eliminate the oxygen minimum requirement.

### III. Administrative Requirements

#### A. Executive Order 12866

Under Executive Order 12866 (58 FR 51735 (October 4, 1993)), the Agency must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the 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 entitlement, grants, user fees, or loan programs or the rights and obligations 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.

The Agency has determined that this regulation would result in none of the adverse economic effects set forth in Section 1 of the Order because it generally relaxes the requirements of the RFG program by providing regulated parties with more flexibility with respect to compliance with the RFG requirements. Pursuant to the terms of Executive Order 12866, OMB has notified EPA that it considers this a "significant regulatory action" within the meaning of the Executive Order. EPA has submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

#### B. 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." Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

If EPA complies by consulting, Executive Order 13132 requires EPA to provide to the Office of Management and Budget (OMB), in a separately identified section of the preamble to the rule, a federalism summary impact statement (FSIS). The FSIS must include

a description of the extent of EPA's prior consultation with State and local officials, a summary of the nature of their concerns and the agency's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. Also, when EPA transmits a draft final rule with federalism implications to OMB for review pursuant to Executive Order 12866, EPA must include a certification from the agency's Federalism Official stating that EPA has met the requirements of Executive Order 13132 in a meaningful and timely manner.

This proposed rule 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. The proposed rule would provide regulatory relief for refiners who choose to make RFG with 10 volume percent ethanol by adjusting the VOC performance standard. As discussed in Section I.H. of the preamble, we believe that the increased VOC associated with the adjusted VOC standard should not affect states' ROP plans in the near term, and does not impose any substantial direct effects on the states. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

#### C. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on

matters that significantly or uniquely affect their communities."

Today's proposed rule does not significantly or uniquely affect the communities of Indian tribal governments. Today's proposed rule does not create a mandate for any tribal governments. This proposed rule applies to gasoline refiners, blenders and importers that supply gasoline to RFG areas. Today's action proposes some changes that would generally relax the Federal RFG requirements, and does not impose any enforceable duties on communities of Indian tribal governments. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this proposed rule.

#### D. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.

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.

For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business that has not more than 1,500 employees (13 CFR 121.201); (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

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. In determining whether a rule has a significant economic impact on a substantial number of small entities, the impact of concern is any significant adverse economic impact on small entities, since the primary purpose of the regulatory flexibility analyses is to identify and address regulatory alternatives "which minimize any significant economic impact of the proposed rule on small entities." 5 U.S.C. 603 and 604. Thus, an agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if

the rule relieves regulatory burden, or otherwise has a positive economic effect on all of the small entities subject to the rule. Today's proposed rule would provide regulatory relief by making the VOC standard for RFG that contains 10 volume percent ethanol slightly less stringent, and by eliminating the oxygen minimum requirement in RFG. These actions will provide more flexibility for refiners to reduce MTBE use by decreasing the cost of ethanol-blended RFG. We have therefore concluded that today's proposed rule will relieve regulatory burden for all small entities. We continue to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

#### *E. Paperwork Reduction Act*

The information collection requirements in this proposed rule have been submitted by approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* An Information Collection Request (ICR) document has been prepared by EPA (ICR No. 1591.11) and a copy may be obtained from Sandy Farmer by mail at OP Regulatory Information Division; U.S. Environmental Protection Agency (2137); 401 M St., SW.; Washington, DC 20460, by email at [farmer.sandy@epa.gov](mailto:farmer.sandy@epa.gov), or by calling (202) 260-2740. A copy may also be downloaded off the internet at <http://www.epa.gov/icr>.

The action will result in revision of the Reformulated Gasoline and Anti-Dumping Batch Report form (EPA Form 3520-20C) that refiners must complete. The form would be revised to include under Item 4.0 a new product type called "Adjusted VOC gasoline". This revision does not represent significant new reporting requirements, nor a substantial increase in the amount of time spent filling out the form. The Office of Management and Budget (OMB) has approved the information collection requirements contained in the final RFG/anti-dumping rulemaking (See 59 FR 7716, February 16, 1994) and has assigned OMB control number 2060-0277 (EPA ICR No. 1591.08). ICR No. 1591.08 will be renewed in July of this year. Upon final promulgation of today's proposal, ICR 1591.11 associated with this rule will be encompassed in the renewed ICR 1591.08.

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 may 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 OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

#### *F. Unfunded Mandates Reform Act*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L. 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.

This proposed rule contains no Federal mandates (under the regulatory provisions of Title II of the UMRA) for State, local or tribal governments or the private sector. The proposed rule would impose no enforceable duty on any State, local or tribal governments or the private sector. This proposed rule applies to gasoline refiners, blenders and importers that supply gasoline to RFG areas. Today's action proposes changes that would provide regulated parties with more flexibility with respect to compliance with the RFG requirements.

#### *G. Executive Order 13045: Children's Health Protection*

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.

EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Order has the potential to influence the regulation. This final rule is not subject to Executive Order 13045, entitled "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), because it does not involve decisions on environmental health risks or safety risks that may disproportionately affect children. For reasons stated in Section I.F. of the preamble, we believe that the adjusted VOC standard for RFG with 10 volume percent ethanol will continue to provide a similar level of benefits to those anticipated from the current standard, and will assure that the Phase II RFG program will continue to achieve the significant environmental benefits for which it was designed.

#### *H. National Technology Transfer and Advancement Act of 1995 (NTTAA)*

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub L. No. 104-113, 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 Reformulated Gasoline Adjustment Proposal Page 82 of Page 92 Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rule does not involve technical standards, and does not specify the use of technical methods. Therefore, EPA did not consider the use of any voluntary consensus standards.

**I. Statutory Authority**

Sections 114, 211, and 301(a) the Clean Air Act as amended (42 U.S.C. 7414, 7545, and 7601(a)).

**List of Subjects in 40 CFR Part 80**

Environmental protection, Air pollution control, Reformulated gasoline.

Dated: June 30, 2000.

**Carol M. Browner,**  
Administrator.

For the reasons set forth in the preamble, we propose to amend part 80 of title 40, of the Code of Federal Regulations to read as follows:

**PART 80—REGULATION OF FUELS AND FUEL ADDITIVES**

1. The authority citation for part 80 continues to read as follows:

**Authority:** Secs. 114, 211, and 301(a) of the Clean Air Act as amended (42 U.S.C. 7414, 7545, and 7601(a)).

2. Section 80.40 is amended by adding paragraph (c) to read as follows:

**§ 80.40 Fuel certification procedures.**

(c)(1) “Adjusted VOC gasoline” for purposes of the Product Transfer Document requirements in § 80.77 is gasoline that contains 10 volume percent ethanol for which the less stringent VOC standards in § 80.41 apply.

(2) Refiners may choose not to designate gasoline which contains 10 volume percent ethanol as “adjusted VOC gasoline”, in which case the more stringent VOC standards in § 80.41 apply.

3. Section 80.41 is amended by revising paragraphs (e) and (f) to read as follows:

**§ 80.41 Standards and requirements for compliance.**

\* \* \* \* \*

(e) *Phase II complex model per-gallon standards.* The Phase II “complex model” standards for compliance when achieved on a per-gallon basis are as follows:

**PHASE II—COMPLEX MODEL PER-GALLON STANDARDS**

VOC emissions performance reduction (percent):	
Gasoline containing 10 volume % ethanol designated for VOC-Control Region 1 .....	26.5
All other gasoline designated for VOC-Control Region 1 .....	27.5
Gasoline containing 10 volume % ethanol designated for VOC-Control Region 2 .....	24.9
All other gasoline designated for VOC-Control Region 2 .....	25.9
Toxic air pollutants emissions performance reduction (percent) .....	20.0
NOx emissions performance reduction (percent):	
Gasoline designated as VOC-controlled .....	5.5
Gasoline not designated as VOC-controlled .....	0.0
Oxygen content (percent, by weight) .....	2.0
Benzene (percent, by volume) .....	1.00

(f) *Phase II complex model averaged standards.* The Phase II “complex model” standards for compliance when achieved on average are as follows:

**PHASE II COMPLEX MODEL AVERAGED STANDARDS**

VOC emissions performance reduction (percent):	
Gasoline containing 10 volume % ethanol designated for VOC-Control Region 1:	
Standard .....	28.0
Per-Gallon Minimum .....	25.0
All other gasoline designated for VOC-Control Region 1:	
Standard .....	29.0
Per-Gallon Minimum .....	25.0
Gasoline containing 10 volume % ethanol designated for VOC-Control Region 2:	
Standard .....	26.4
Per-Gallon Minimum .....	23.4
All other gasoline designated for VOC-Control Region 2:	
Standard .....	27.4
Per-Gallon Minimum .....	23.4
Toxic air pollutants emissions performance reduction (percent) .....	21.5

**PHASE II COMPLEX MODEL AVERAGED STANDARDS—Continued**

NO <sub>x</sub> emissions performance reduction (percent):	
Gasoline designated as VOC-controlled .....	6.8
Gasoline not designated as VOC-controlled .....	1.5
Oxygen content (percent, by weight):	
Standard .....	2.1
Per-Gallon Minimum .....	1.5
Benzene (percent, by volume):	
Standard .....	≤0.95
Per-Gallon Maximum .....	≤1.30

4. Section 80.67 is amended by revising paragraph (g)(1) and by adding paragraph (h)(4) to read as follows:

**§ 80.67 Compliance on average.**

\* \* \* \* \*

(g) \* \* \*  
(1)(i)(A) The compliance total using the following formula:

$$\text{COMPLIANCE TOTAL} = \left( \sum_{i=1}^n V_i \right) \times \text{std}$$

Where:

- V<sub>i</sub>=the volume of gasoline batch i
- std=the standard for the parameter being evaluated
- n=the number of batches of gasoline produced or imported during the averaging period and
- (B) For computation of the VOC performance standard compliance total, Std for each VOC control region is determined by the following formula:

$$\text{Std} = \frac{\text{Std}_u \times \sum_{i=1}^{n_u} VU_i + \text{Std}_a \times \sum_{i=1}^{n_a} VA_i}{\sum_{i=1}^{n_u} VU_i + \sum_{i=1}^{n_a} VA_i}$$

Where, for gasoline and RBOB designated for that VOC control region:

- Std=the value to be used in the compliance total formula;
- Std<sub>u</sub>=the averaged VOC emissions performance reduction standard applicable to reformulated gasoline and RBOB not designated for compliance with the adjusted VOC gasoline standard
- Std<sub>a</sub>=the averaged VOC emissions performance reduction standard applicable to reformulated gasoline and RBOB designated for compliance with the adjusted VOC gasoline standard
- VU<sub>i</sub>=the volume of batch i not designated for compliance with the adjusted VOC gasoline standard
- VA<sub>i</sub>=the volume of batch i designated

for compliance with the adjusted VOC gasoline standard  
 n<sub>u</sub>=the number of batches produced or imported and not designated for compliance with the adjusted VOC gasoline standard  
 n<sub>a</sub>=the number of batches produced or imported and designated for compliance with the adjusted VOC gasoline standard and  
 (C) The actual total using the following formula:

$$\text{ACTUAL TOTAL} = \sum_{i=1}^n (V_i \times \text{parm}_i)$$

Where:

V<sub>i</sub>=the volume of gasoline batch i  
 parm<sub>i</sub>=the parameter value of gasoline batch i

n=the number of batches of gasoline produced or imported during the averaging period

(ii) [Reserved]

\* \* \* \* \*

(h) \* \* \*

(4) In the case of gasoline containing 10 volume percent ethanol oxygen credits may be generated, transferred and used for such gasoline only if it is not identified in the Product Transfer Document per § 80.77(g)(4)(B)(3) as "adjusted VOC gasoline" as defined in § 80.40(c).

\* \* \* \* \*

5. Section 80.68 is amended by revising paragraph (c)(8)(ii)(B) to read as follows:

**§ 80.68 Compliance surveys.**

\* \* \* \* \*

(c) \* \* \*

(8) \* \* \*

(ii) \* \* \*

(B) The covered area shall have failed the complex model VOC survey if the VOC emissions reduction percentage average of all survey samples is less than the weighted average of the applicable per-gallon standards for VOC emissions reduction calculated according to the following formula:

$$\text{WSTD} = \frac{\text{VOCU} \times n_u + \text{VOCA} \times n_a}{n}$$

Where:

WSTD=Weighted average of the applicable per-gallon VOC standards

VOCU=Per gallon VOC standard applicable in the covered area to RFG containing less than 10% ethanol by volume

VOCA=Per gallon VOC standard applicable in the covered area to RFG containing 10% ethanol by volume

n<sub>u</sub>=Number of samples in the VOC

survey with oxygen content less than 3.5% by weight  
 n<sub>a</sub>=Number of samples in the VOC survey with oxygen content equal to or greater than 3.5% by weight  
 n=Total number of samples in the VOC survey

\* \* \* \* \*

6. Section 80.69 is amended by revising the introductory paragraph to read as follows:

**§ 80.69 Requirements for downstream oxygenate blending.**

The requirements of this section apply to all reformulated gasoline blendstock for oxygenate blending, or RBOB, to which oxygenate is added at any oxygenate blending facility, except that paragraph (a)(7) of this section does not apply to "adjusted VOC gasoline" as defined in § 80.40(c).

\* \* \* \* \*

7. Section 80.77 is amended by revising paragraph (g)(3) to read as follows:

**§ 80.77 Product transfer documentation.**

\* \* \* \* \*

(g) \* \* \*

(3) Identification of VOC-controlled reformulated gasoline including "adjusted VOC gasoline" as defined in § 80.40(c), or RBOB as gasoline, or RBOB which does not contain any ethanol, or RBOB which contains less than 10 volume % ethanol, or RBOB which must contain 10 volume % ethanol and is used to make "adjusted VOC gasoline".

\* \* \* \* \*

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**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 125**

[FRL-6734-8]

**Ocean Discharge Criteria: Revisions to Ocean Discharge Criteria Regulations; Notice of Public Meetings**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice of meetings.

**SUMMARY:** This document announces that the Environmental Protection Agency (EPA) is inviting all interested members of the public to participate in any or all of a series of public meetings on its plan for revising the Ocean Discharge Criteria regulations and to solicit public input on the plan. These regulations implement section 403 of the Clean Water Act. The EPA is hosting

these meetings in five cities between late July and mid-August 2000.

**DATES:** See Supplementary information section for meeting dates.

**ADDRESSES:** See **SUPPLEMENTARY INFORMATION** section for meeting locations.

**FOR FURTHER INFORMATION CONTACT:** For general information on the meetings, write Marine Pollution Control Branch, ATTN: Ocean Discharge Criteria, US Environmental Protection Agency, MC 4504F, 1200 Pennsylvania Avenue NW, Washington, DC, 20460, or email to: ocean.discharges@epa.gov, or fax to: 202/260-9920. You may also call Macara Lousberg, at telephone 202/260-9109.

**SUPPLEMENTARY INFORMATION:**

**Public Meeting Information**

The public meetings will be held on the following dates, times and locations:

1. Tuesday, July 25, 2000, 9 a.m. to 12:00 noon; and 1-4:30 p.m., in Washington, DC—Holiday Inn—National Airport, 2650 Jefferson Davis Highway, Arlington, VA 22202
2. Thursday, July 27, 2000, 1-4:30 p.m. and 7-9 p.m., in Boston, MA—Wyndham Boston Hotel, 89 Broad Street, Boston, MA 02110
3. Tuesday, August 1, 2000, 1-4:30 p.m. and 7-9 p.m., in Portland, OR—Portland Conference Center, (Morrison Room), 300 NE Multnomah Street, Portland, OR 97232
4. Thursday, August 3, 2000, 1-4:30 p.m. and 7-9 p.m., in Los Angeles, CA.—Los Angeles Convention Center, 201 S. Figueroa St., Los Angeles, CA 90015
5. Wednesday, August 9, 2000, 1-4:30 p.m. and 7-9 p.m., in Tampa, FL—Holiday Inn Express—Airport Stadium, (Lakeside x4), 4732 N. Dale Mabry Highway, Tampa, FL 33614

Members of the public who plan to attend any of these meetings should write, call, email or fax to the address listed in the **FOR FURTHER INFORMATION CONTACT** section above. Include your name, affiliation, address and phone number, and whether you wish to make a statement. The Agency will use the information to arrange enough time on the agenda for public comment.

**Background**

On May 26, 2000, President Clinton signed Executive Order 13158 which among other things explicitly directs EPA to take action to better protect marine and coastal areas. Section 4(f) of the Executive Order on Marine Protected Areas states: