

Report to the President

Task Force on Boutique Fuels

**Convened by Administrator Johnson,
U.S. Environmental Protection Agency**

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I. Executive Summary

As part of a broad initiative to respond to high fuel prices, on April 25, 2006, President Bush directed Administrator Johnson to convene a Task Force of States to review the variety of requirements related to fuels. The Task Force was charged with identifying opportunities to increase cooperation among federal government and states on gasoline supply decisions and to reduce the number of boutique fuels. Administrator Johnson invited all 50 Governors, or their designated representatives, to participate in a Task Force on Boutique Fuels (Task Force) which was composed exclusively of representatives from the States, EPA, and the Departments of Energy and Agriculture.

The Task Force, as part of this effort, discussed the Agency's findings from *The Study on Unique Fuel Blends (Boutique Fuels)* conducted in 2001 by EPA as directed by the President's National Energy Policy Report. Since that time, a number of activities in the fuels arena have occurred that directly and indirectly impact the findings of the 2001 study. Of greatest significance was the enactment of the *Energy Policy Act of 2005 (EPAct)* which contains provisions directly and indirectly affecting state boutique fuel programs.

The Task Force gathered relevant information related to boutique fuels from numerous stakeholders. To facilitate this exchange of information, a forum was provided for stakeholders, from refiners to public health groups to automakers, to express their understanding of the issues related to the use of boutique fuels. Their views and concerns are provided in summary in this report.

After carefully evaluating comments from the Task Force participants and stakeholders, EPA submits to the President this report of findings, actions and recommendations for consideration in addressing boutique fuels:

- The Task Force participants agreed, in general, that the U.S. gasoline production and distribution system is able to provide adequate quantities of boutique fuels, as long as there are no disruptions in the supply chain. If a disruption occurs (such as a hurricane or pipeline break) it becomes more difficult to move gasoline supplies around the country because of the limitations imposed by the boutique fuel requirements. Existing authorities have been used to temporarily waive boutique fuel requirements during times of supply disruption.
- It is clear that state fuel programs have provided significant, cost-effective air quality improvements. Any actions to modify the slate of existing boutique fuels or limit a state's ability to adopt fuel specifications should be done in a manner that at least maintains these air quality gains and avoids unnecessarily restricting state authority.
- EPA has and will continue to expeditiously implement the requirements of the Energy Policy Act of 2005 (EPAct) as they relate to boutique fuels. These actions will limit the growth of new boutique fuel requirements.

- The participants emphasized that any future analysis of potential changes to the number and types of fuels must utilize the most up-to-date data and analytical tools. The 2008 EPA/DOE *Fuel System Requirements Harmonization Study* should ensure that all aspects, including impacts changes to fuel requirements may have on air quality, as well as the new generation of vehicles, fuel fungibility, supply and cost, are appropriately addressed.
- As part of the analyses of future fuel options, careful consideration should be given to the possibility of new legislative authority which would allow for the adoption of regional clean fuel programs. Cleaner burning fuels used in the broader geographic areas merit further study as an additional option for addressing fuel supply and fungibility concerns.
- Renewable fuels are an important part of the nation's plan to reduce our dependence on foreign oil. States are undertaking a number of actions to promote the use of such fuels and the federal government is implementing programs, notably the Renewable Fuels Program established by EPCRA, to do the same. It will be beneficial to undertake additional study to ensure these programs are working together and will not create undue impacts on air quality, fuel fungibility, supply and cost considerations.

II. The Task Force

The Administrator established a process and set forth several key elements the Task Force should address, culminating with a report to the President. The Task Force meetings provided the opportunity for all participants to share information, present their views, positions and recommendations, and provide input and comment on this report¹. Also, the critical stakeholders, including those in the refining, marketing and fuel distribution sectors, as well as others, were provided the opportunity to present their views and opinions before the Task Force for evaluation and consideration.

Specifically, the Task Force was asked to review the current boutique fuels situation in the United States (US), review any actions taken since EPA last investigated and reported² on the boutique fuels situation, review the relevant provisions in EPCRA, provide for stakeholder input, and then assess and report on any options, recommendations or further informational needs to effectively address the impact boutique fuels have on the US fuels market.

There has been some issue raised over the abbreviated timeframe set for the Task Force to complete its work. While the two month period is an abbreviated time in which to address such a complicated issue, the Administrator wanted to complete this report as quickly as possible for two main reasons. First, as there continues to be ongoing public discussion and Congressional interest in this issue, it is important that the Task Force's very useful work be included in this debate in order to help inform policy makers. Second, the Task Force

¹ Materials distributed at Task Force meetings have been posted on the Boutique Fuels Task Force website (<http://www.epa.gov/otaq/boutique-task-force.htm>)

² "Study of Gasoline Fuel Blends ("Boutique Fuels"). Effects on Supply and Distribution and Potential Improvements" (October 2001).

report should be construed as the first step in a comprehensive effort to address issues related to the nation's fuel supply. It is a key part of the broader process in which EPA, working in conjunction with the Department of Energy, will be analyzing both boutique fuel issues and the broader issue of the nation's fuel system. The observations and recommendations in this report will help guide these later efforts.

This report provides guidance to the President on potential actions and next steps toward meeting the goal of simplifying and increasing the supply and fungibility of the US fuel system, and to encourage cooperation among the states on fuel supply decisions.

III. Current Understanding of Use and Utility of Boutique Fuels

Boutique fuels are used primarily in urban areas to address specific air quality problems, most particularly ozone. The control of certain fuel properties, such as fuel volatility, helps reduce exhaust and evaporative emissions from motor vehicles that cause or contribute to air pollution. Boutique fuels typically account for between 10 to 15 percent of the nation's summertime gasoline supply. Where implemented, these fuels are an important and powerful tool for combating local air pollution problems.

Boutique fuels³ as defined in this report are:

- Any clean fuel program designed and enforced under state authority to reduce motor vehicle emissions and improve air quality; and,
- Approved by the Agency under the authority of Section 211 (c)(4)(c) of CAA Amendments of 1990; and,
- Included in an EPA-approved state [clean air] Implementation Plan (SIP).

In the Clean Air Act Amendments of 1990, Congress established a number of clean fuel programs to reduce harmful emissions from our nation's vehicles. Following implementation of these new clean fuel programs, it became more evident that controlling fuel quality presented another opportunity to support timely attainment of the air quality standards. One of the primary programs available was the federal reformulated gasoline program (RFG)⁴. The RFG program was implemented in two phases, beginning in 1995, followed by the application of more stringent controls in 2000. RFG has been demonstrated to be highly cost effective and has provided significant reductions in air pollution levels in cities throughout the nation. Some states had the authority to opt into the federal RFG program. However, the Clean Air Act did provide certain restrictions, which were based on the severity of the air quality for these areas. Further, beyond these restrictions, concerns over RFG production costs, the oxygenate requirement⁵ and the use of MTBE (methyl tertiary-butyl ether) pushed states, both with and without authority to opt-in to the RFG program, to consider alternative options. Some states, working with local fuel providers, chose to implement their own unique or "boutique" fuel program. These programs were specifically designed to address and support timely attainment of the air quality standards.

³ Fuel programs not included under this definition include state or area specific fuels required by law but not requiring a Clean Air Act Section 211(c)(4)(c) waiver.

⁴ For information on RFG go to: <http://www.epa.gov/otaq/rfg.htm#Fact>

⁵ The Clean Air Act required federal Reformulated Gasoline to contain a minimum of 2 weight percent oxygen.

In order for states to adopt a fuel control different from the federal requirements, states must satisfy certain criteria. Specifically, the Clean Air Act (both prior to and following amendments made by EPA that impose additional requirements discussed below) imposes strict limitations on EPA's authority to approve boutique fuels by pre-empting states from adopting unique specifications for the purposes of controlling air quality unless EPA authorizes waiver of the pre-emption provisions. A state is allowed to prescribe and enforce a fuel quality control if the Administrator finds that the state control or prohibition is necessary to achieve a national primary or secondary ambient air quality standard and that no other reasonable measures are available to bring about timely attainment.

In order for state regulations to be incorporated into the federally-enforceable SIP, states must formally adopt regulations and control strategies consistent with state and federal requirements. This state process generally includes a public notice, public hearing, public comment period, and a formal adoption by an authorized rulemaking body. Once a state rule, regulation, or control strategy is adopted, the state submits it to the Agency for inclusion into the SIP. EPA must also provide public notice and seek additional public comment regarding the proposed federal action on the state submission. If adverse comments are received, they must be addressed prior to any final federal action. In determining the approvability of a SIP revision, EPA must evaluate the proposed revision for consistency with the requirements of the CAA and the applicable regulations, as found in section 110 and part D of Title I of the CAA amendments and 40 CFR Part 51 (Requirements for Preparation, Adoption, and Submittal of Implementation Plans).

In all cases, SIP approved clean fuel programs were designed by states in conjunction with industry stakeholders. In the process that has been utilized, state authorities evaluate the affected industry's ability to produce and distribute these fuels, as well as make a determination of the cost and effectiveness of the program. State submittals must include the necessary elements described above in order to obtain EPA approval.

Historically, implementing a localized fuel quality control strategy can generally occur in a shorter period of time, as compared to other control strategies, and provide immediate environmental benefits. These programs have proven to be very successful in providing significant reductions in targeted emissions at a very low cost. State controls on RVP have been estimated to cost as little as 0.3 cents per gallon to about 3 cents per gallon.

Currently, 12 states have established state specific SIP-approved controls on fuels. The following table lists the areas with boutique fuels as identified and recently published by the Agency. A map is also provided to graphically illustrate the location of the state programs.

**BOUTIQUE FUEL PROGRAMS INCLUDED IN
STATE [CLEAN AIR] IMPLEMENTATION PLANS (SIPs) (As of May 4, 2006)**

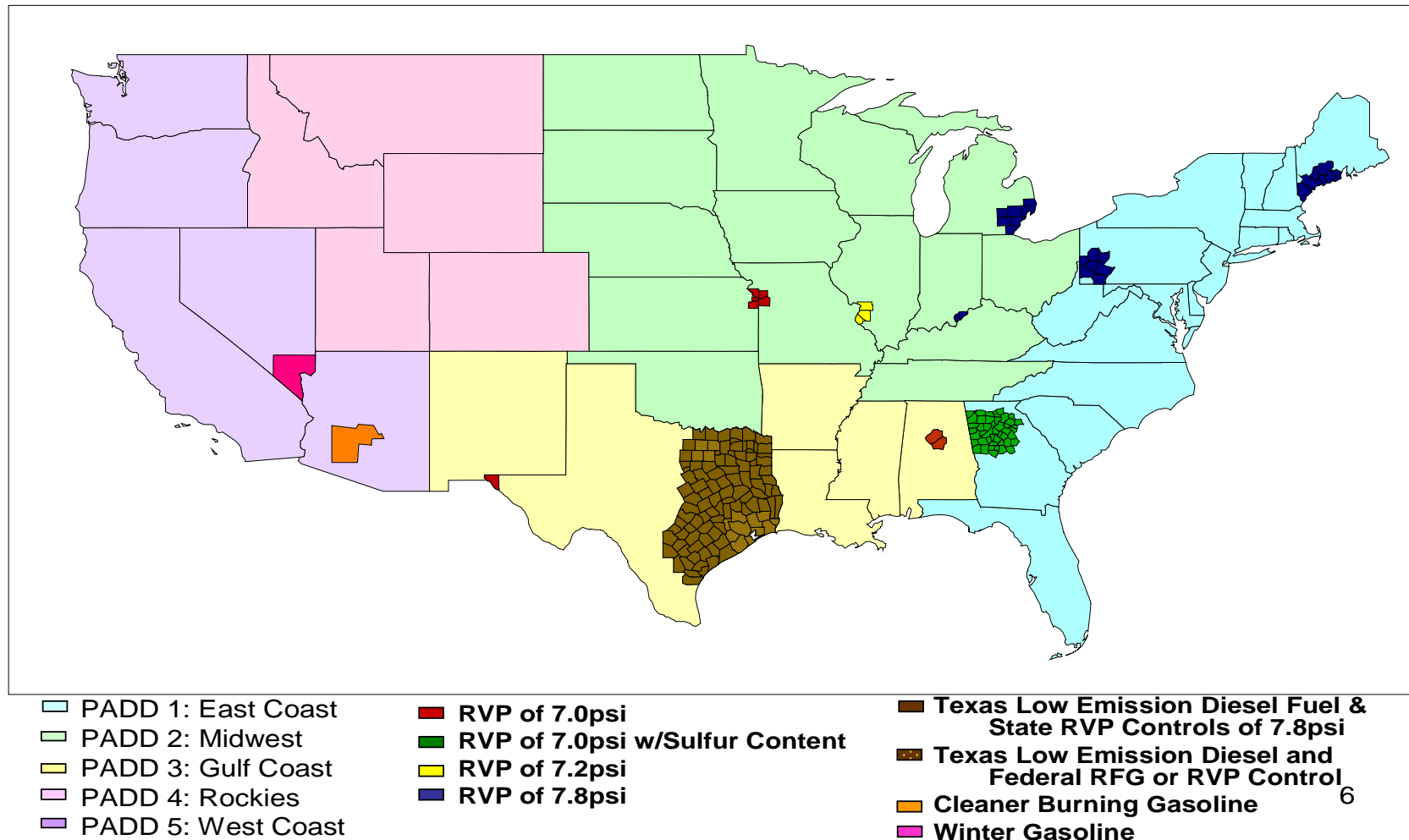
| Type of Fuel Control* | PADD** | Area/state |
|--|--------|---|
| RVP*** of 7.0 psi | 2 | Kansas City, MO (3 counties) |
| RVP of 7.0 psi | 2 | Kansas City, KS (2 counties) |
| RVP of 7.0 psi | 3 | El Paso, TX (El Paso county) |
| RVP of 7.0; extended summer season from June 1 to September 30 | 5 | Phoenix, AZ (Maricopa County) |
| RVP of 7.0 psi; includes a provision addressing sulfur content | 1 | Atlanta, GA (45 county area) |
| RVP of 7.0 psi | 3 | Birmingham, AL (2 counties) |
| RVP of 7.2 psi | 2 | E. St. Louis, IL (3 counties near St. Louis, MO) |
| RVP of 7.8 psi | 1 | Pittsburgh, PA (7 county area) |
| RVP of 7.8 psi | 2 | Clark & Floyd, IN (2 counties near Louisville, KY) |
| RVP of 7.8 psi | 2 | Detroit, MI (7 counties) |
| RVP of 7.8 psi; extended summer season from May 1 to September 15 | 1 | Southern, ME (7 county area) |
| RVP of 7.8; extended summer season from May 1 to October 1 | 3 | Central & Eastern, TX (95-county area) |
| Low emission diesel fuel with maximum 10% volume aromatic hydrocarbon content and minimum cetane of 48 required. (Allows substitute Plans w/equivalent NOx reductions) | 3 | 110 counties in eastern Texas, including Houston & Dallas Areas |
| Cleaner Burning Gasoline; similar to federal RFG or California RFG in summer; in winter similar only to California RFG. | 5 | Phoenix, AZ (Maricopa County) |
| Winter gasoline controls on aromatic hydrocarbons and sulfur. | 5 | Las Vegas, NV |

* Unless otherwise specified, RVP control is in effect June 1 to September 15.

** PADD: Petroleum Administration for Defense Districts.

*** RVP: Reid Vapor Pressure is a measure of gasoline's evaporation rate. Higher RVP gasoline evaporates more easily at summer temperatures.

State Boutique Fuel Programs – May 2006



IV. Highlights of EPA's 2001 Boutique Fuels Study

The President's National Energy Policy Report issued on May 17, 2001, included a directive to EPA to study the opportunities to maintain or improve the environmental benefits of state and local "boutique" clean fuel programs while exploring ways to increase the flexibility of the fuels distribution infrastructure, improve fungibility, and provide added gasoline market liquidity. On October 23, 2001, EPA issued a ***"Study of Unique Gasoline Fuel Blends ("Boutique Fuels"), Effects on Fuel Supply and Distribution and Potential Improvements."*** In this study, EPA concluded that, in 2001, the gasoline production and distribution system was able to provide adequate quantities of boutique fuels, as long as there were no disruptions in the supply chain. If a disruption occurs (such as a pipeline break or refinery fire) it becomes more difficult to move gasoline supplies around the country because of the limitations imposed by the boutique fuel requirements.

Within this study, EPA reviewed state and local boutique fuel programs, federal fuel programs, as well as the motivation and causes for state boutique fuels, and assessed the impact these fuels have on fuel production and the distribution system. EPA then analyzed potential ways to mitigate the impact of disruptions (i.e. refinery fires, pipeline shutdowns) by allowing for a more fungible system. In preparing the 2001 study, the Agency sought input from the U.S. Departments of Energy⁶ and Agriculture, and more than 40 stakeholders.

EPA developed a preliminary analysis of four fuel program options that could reduce the total number of fuels. The fuel options that EPA analyzed were: 1) a three-fuel option (federal RFG, Low RVP (7.0), and conventional gasoline); 2) a two-fuel option (federal RFG and conventional gasoline); 3) a 49-state federal nationwide clean burning gasoline (CBG); and, 4) California fuel (California CBG) nationwide (A detailed summary is included in Appendix 2). These options were analyzed under the following principles:

- Improve the fungibility and movement of gasoline across the country;
- Maintain or improve emission performance for each area of the country that was covered by a fuel program;
- Maintain or improve the ability of fuel producers to produce sufficient gasoline to meet demand; and,
- Minimize the net cost when considering both production and distribution.

All of the fuel options were evaluated in four ways: with and without a national benzene standard, with the RFG oxygen mandate in place and with the RFG oxygen standard replaced by a national renewable fuels content requirement.

⁶ The Department of Energy provided comments regarding the analytical approach to the 2001 Study. Their comments, as well as others, are available for review in EPA docket (EPA-HQ-OAR-202-0003).

In assessing the options, certain assumptions were made regarding states' choices when a menu of fuels is offered, as under the 2-fuel and 3-fuel options. An underlying assumption was that states would retain the statutory right to receive a waiver of preemption under certain conditions, to regulate fuel characteristics. Rather than states exercising this right, they would limit their choices to the fuels contained in the options. For example, a state may have designed its own fuel program instead of opting into the federal RFG program because of the RFG oxygenate mandate. This same state might opt into either the 2-fuel or 3-fuel option without the RFG oxygen mandate with resulting fuel distribution benefits.

EPA's analysis of the fuel options concluded that there are trade-offs when attempting to simplify gasoline distribution and reduce market volatility. The fuel options identified to produce the greatest benefits under these goals would also entail the greatest production costs and reductions in gasoline production capacity. The fuel option scenarios analyzed in the report would extend cleaner gasoline throughout the country and therefore would result in varying levels of benefits. However, all four scenarios resulted in positive air quality benefits, although with varying levels of results. The following table summarizes the impact each analyzed option would have on these factors.

Impact of Fuel Options on Gasoline Supply, Distribution, Cost and Air Quality
[From 2001 EPA Study]

| Option | RFG / Renewable Fuel Mandate | Ease of Distribution | Gasoline Production Capacity | Long Term Cost | Air Quality Impact |
|-----------------------|------------------------------|----------------------|------------------------------|-----------------|--------------------|
| 3-Fuel | Yes/No | ↑ | -- | -- | ↑ |
| | No/Yes | ↑↑ | ↑ | -- | ↑ |
| 2-Fuel | Yes/No | ↑ | ↑ | ↓ (higher cost) | ↑↑ |
| | No/Yes | ↑↑ | ↑ | -- | ↑↑ |
| Federal CBG | No/Yes | ↑↑↑ | ↓↓ | ↓↓ | ↑↑ |
| California CBG | No/Yes | ↑↑↑ | ↓↓↓ | ↓↓↓ | ↑↑↑ |

Key: ↑ Indicates Positive Impact ↓ Indicates Negative Impact

Seasonal Fuel Transition Issues

In a separate study,⁷ EPA also investigated seasonal transition concerns that arise when higher RVP gasoline must be replaced with lower RVP summer grade gasoline. Winter grade conventional gasoline and winter grade reformulated gasoline have a higher Reid Vapor Pressure, or RVP, than corresponding summer grades. Gasoline RVP is permitted to be relatively high during colder months because the colder temperatures reduce the tendency of gasoline to evaporate and to produce emissions of volatile vapors. Also, higher volatility gasoline is generally necessary to support proper cold weather operation of vehicles. Conversely, lower RVP in gasoline is beneficial because warmer

⁷ *Study of Boutique Fuels and Issues Relating to Transition from Winter to Summer Gasoline* (October 2001) <http://www.epa.gov/otaq/regs/fuels/r01051.pdf>

weather has the tendency to cause gasoline to evaporate more easily, releasing volatile organic compounds into the atmosphere. It is important to note that industry will make this seasonal transition to support vehicle performance and operational issues, regardless of whether any environmental regulations are in place.

In this study, EPA identified a set of administrative and regulatory options as near term actions that could better facilitate seasonal gasoline transition and reduce the incentives for low inventories.

V. Relevant Fuel Actions Taken Since 2001

Since the publication of the 2001 EPA studies, several significant changes have occurred in the US gasoline market. Seasonal transitional concerns over the switch from winter to summer gasoline, as well as other actions taken to lessen stresses on the gasoline supply system, have had a direct impact on the positions, options and recommendations set forth by the Task Force in this report. A summary of the actions and related impacts are provided in Appendix 1. A brief listing of these actions is noted below.

In addition, several significant changes to fuel quality, such as the federal requirements to control gasoline and diesel fuel sulfur levels, as well as changes in the make up of the refining, marketing and distributions sectors, must be considered in future evaluations of fuel options. With demand increases outpacing investments in production capacity, stresses on production and distribution systems have resulted in a significantly different fuels market landscape than that at the time the 2001 Boutique Fuels study was conducted. Evaluation of these conditions, along with several regulatory and policy actions made to ease some of the market constraints identified in the study, will require further investigation.

To provide for a more orderly transition from winter-to-summer grade RFG every spring, EPA took the following actions:

- Allowed fuel producers more flexibility in meeting fuel specifications than they previously had for their initial transition to summer fuel.
- Allowed certain gasoline types to be reclassified as RFG, thus making it easier to address localized issues that arise when there is an unexpected disruption in the distribution system

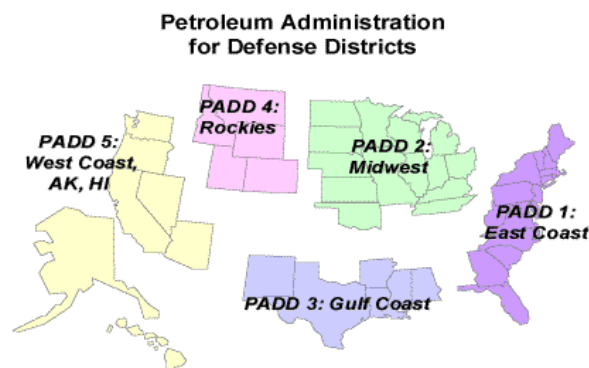
To provide greater flexibility to fuel producers and suppliers, EPA took additional actions that:

- Simplify certain RFG accounting and reporting requirements
- Allow parties to change the service of a tank where residual amounts of gasoline (tank heel) remain in the tank

- Allow butane blenders to blend butane into conventional or RFG under alternative sampling and testing options, which has the potential for increasing gasoline supplies
- Allow importers to conduct remedial blending of off-spec imported gasoline by treating it as blendstock, ultimately providing additional flexibility to respond to market demands
- Provide a more flexible approach for transmix processors and blenders to comply with RFG requirements and Tier 2 gasoline sulfur standards, resulting in potential for increases in gasoline supplies
- Provide renewable blendstock for oxygenate blending (RBOB) refiners an alternative method of fulfilling quality assurance requirements, enabling refiners to produce RBOB for ethanol blending that results in greater ability to respond to market needs
- Provide alternative sampling and testing approaches allowing truck importers to comply based on test results from the loading terminal instead of from the truck, making importation of gasoline by truck easier and less costly.

VI. Boutique Fuels and Related Provisions Required by the EPAct

Due to heightened concern over supply and price issues and the potential for boutique fuel programs to exacerbate these issues, Congress directly addressed the subject of boutique fuels in several sections of the EPAct. Specifically, section 1541(b) requires EPA to publish a boutique fuels list based on fuels in the market as of September 1, 2004. Following careful review and consideration of the direction Congress provided in this section, on June 6, 2006, EPA published a draft listing of boutique fuels for public comment (71 FR 32532). This list identified 12 states that have implemented an EPA-approved boutique fuel program to support attainment of the air quality standards. This list explicitly limits the type, and to some extent geographical application (by Petroleum Administration for Defense Districts - PADDs) of these fuels in the US market.



Currently, there are 15 different state SIP fuel provisions (in 12 states) in the various PADDs. These state regulations cover seven different fuel types, most typically based on controlling gasoline volatility.

Under EPAct, EPA may approve a state fuel program for a SIP only if:

- That fuel is already approved in a SIP for a state in that PADD, and

- The approval does not increase the total number of state fuels on EPA's list of fuels.
- If a new fuel is added to the list, EPA with Department of Energy consultation must find no adverse impact on supply and distribution.

The PADD restrictions are a powerful constraint on the expansion of state fuel programs. It is important to note that these restrictions apply in addition to the Clean Air Act restrictions discussed in the previous sections of this report.

In addition to the program and regulatory modifications described above, several significant changes to the federal gasoline requirements have been, or will be made as a result of passage of EPAct 2005. The most significant action is the removal of the federal oxygen content requirement for the RFG program. This change allows refiners and importers to produce or import RFG with or without oxygen as long as the gasoline meets all other RFG requirements. This additional flexibility enables refiners and importers to produce and distribute RFG in the most cost-effective manner. Another change implemented a provision of the EPAct which allows retail gasoline stations the opportunity to commingle ethanol-blended RFG with non-ethanol-blended RFG during two ten-day periods of the VOC-control season. The ability to commingle these products will provide retailers with additional flexibility to change their tanks from one product to the other, which will help to ensure the continued availability of gasoline to retail customers in the event that one type of gasoline is in limited supply.

Studies and Reports

EPAct also established requirements for further evaluation of the impact boutique fuels have in the US. Specifically, Section 1541(c) requires EPA and DOE to join in developing a study on the effects of boutique fuels on air quality, fuel blends, fuel availability, fungibility and costs. The Agency and DOE are currently in consultation and are planning to issue a joint report for submission to Congress in August of 2006. EPA plans to use the findings in this Task Force Report to inform the development of the plan for the study.

Further, Section 1509 of EPAct requires the Agency and DOE to prepare a report by June 1, 2008, referred to as the ***Fuel System Requirements Harmonization Study***, concerning variations in regional, state and local motor vehicle fuel requirements. This report must account for recent and anticipated changes in the US gasoline and fuels supply and distribution market.

EPAct Relief for Fuel Supply Interruptions

To address unusual fuel supply situations, Congress granted EPA new authority to grant waivers for federally-enforceable fuel regulations, which includes SIP-approved fuel requirements. The source of this authority is found in section 1541 of EPAct. This provision authorizes the Administrator of EPA to waive a control or prohibition of the use of a fuel or additive if, after consultation with and concurrence by the Secretary of Energy, the Administrator determines extreme or unusual fuel or fuel additive "supply"

circumstances exist which prevent the distribution of an adequate “supply” of a fuel or fuel additive to consumers. The authority specifically states that the circumstances are to be the result of a natural disaster, an Act of God, a pipeline or refinery equipment failure or another event that could not reasonably have been foreseen or prevented and not the lack of prudent planning. Additionally, any waiver must apply to the smallest geographic area necessary to address the unusual circumstances, be effective for 20 days (or less), allow for a transitional period, and apply to all parties in the distribution system.

Recent use of this authority occurred as a result of hurricanes Katrina and Rita, in the late summer and early fall of 2005 when EPA, in consultation with DOE, successfully issued a series of limited fuel waivers for specific gasoline and diesel quality standards. These waivers were authorized and approved based on supply concerns. EPA’s waiver authority and decisions were universally supported by the affected stakeholders. Additionally, states use their individual authorities to waive their state boutique fuel requirements.

VII. Stakeholder Reports/Summaries

In an effort to obtain current and fully representative views and perspectives from affected industry and public sector stakeholders, EPA invited representatives of associations and public interests groups to provide input into this process. Representatives from 20 organizations were invited to respond to targeted questions and to participate in a meeting convened by EPA in Washington, DC on May 18th. Nineteen organizations, representing the refining, distribution, marketing and user groups, as well as state and public interest sector and the automotive industry provided responses and/or delivered presentations at this meeting.

A range of opinions and perspectives were provided by the stakeholders. The following characterizes the more critical messages presented by the stakeholder representatives:

PRODUCERS (Petroleum Refiners and Renewable Fuel Producers)

There were several consistent recommendations offered by both the petroleum refiners and renewable fuel providers:

- Market conditions have changed significantly since the release of EPA’s 2001 Boutique Fuels Study and the assertions, assumptions and scenarios are dated and therefore recommend updating the report.
- Federal fuels are moving in the right direction and implementing and understanding the impact EPA provisions will have on the fuels market should occur prior to taking further action. Congress specifically set forth a plan for how to address and further evaluate boutique fuels, and included specific provisions to relieve fuel market supply and fungibility pressures.

Petroleum Refiners

- No change in boutique fuel requirements will affect the supply situation this summer. Failure to consider and balance supply implications, air quality and fuel choices could have unintended consequences.
- There have been several significant changes made under EPO that would limit the need for additional unique fuel blends.
- Believe the scope of the how boutique fuels are defined in this process is too narrow and should be expanded to include other state (non-211(c) (4) (c)) programs – such as state biofuel mandates. They expressed significant concern with the potential for market segmentation resulting from the escalation of state renewable fuel programs, and the potential complexity these will add to the entire production and distribution system and indicated support for legislation granting the Agency authority to pre-empt or limit the proliferation of these state mandates.

Renewable Fuel Producers

- Supportive of the national renewable fuel provisions.
- Do not favor limiting state authority to implement individual renewable fuel incentive requirements or standards.

DISTRIBUTION AND MARKETING (Pipelines, Terminals, Marketers)

Stakeholders from the distribution and marketing sector expressed several unified messages:

- The distribution and marketing sector strongly contends that any decision for change must fully consider the entire system, including pipelines, terminals and the wholesale and retail sectors.
- Boutique fuels impact supply and price even in normal market situations.
- Encourage restrictions that will mitigate the proliferation of boutique fuels and support a gradual reduction in boutique fuels through a measured approach.
- Strongly caution against any regulatory changes that might result in a loss of supply.
- Support implementation of the provisions of EPO that serve to address fuel fungibility and supply issues.
- The definition of boutique fuels should be expanded to include state renewable fuel programs. State biofuel mandates are of great concern and must be considered in evaluating boutique fuels impact on the US market.

STATE AND PUBLIC INTEREST GROUPS (Associations Representing State Agencies and Environmental Organizations)

State and public interest stakeholders were aligned in a number of areas:

- Boutique fuel programs have provided positive results, and they oppose consideration of any changes that have the potential for negative effects on air quality.
- States should retain the ability and flexibility to choose fuel programs, regional or otherwise, to support their air quality needs.

- EPA provisions related to boutique fuels should be implemented prior to making any changes. The market has experienced a lot of change since EPA released the 2001 Boutique Fuels Study and further evaluation is necessary.

Environmental and Public Health Interests

- Prior to making any changes, a comprehensive, balanced examination of fuel issues, including effects on environment, health, supply and costs, should be conducted.
- A more comprehensive understanding of the impact renewable fuel standards have on public health and the environment is necessary.

State Associations

- General support for exploring the ability for states to adopt a regional approach to fuel quality controls.
- Opposed to any limitations on adopting state bio or renewable fuel standards.
- Indicated EPA and state authority is adequate to address supply disruptions.
- Oppose further restrictions on state authority to adopt fuels necessary to protect air quality and public health.
- No evidence that boutique fuels have caused any problems and waiver authority exists to address short term supply issues.

AUTOMAKERS AND ENGINE MANUFACTURERS

(Associations Representing National and International Light-duty Vehicle and Heavy-duty Engine Manufacturers)

There were several general messages presented by the automotive and engine manufacturing sector:

- Support a more harmonized approach to controlling fuel quality.⁸ Specifically, they support single national clean gasoline and clean diesel fuel standards. Unification of fuel quality standards supports more stringent calibration of engines and vehicles, ultimately resulting in optimization of emissions control and vehicle performance. Optimization can have positive effects on both air quality and vehicle efficiency.
- The 2001 Boutique Fuels Study should be updated.
- Expressed concerns over the lack of fuel specifications that would ensure that biofuel and renewable fuel standards would meet manufacturer recommended quality specifications, and thereby avoid the potential to negatively impact both emissions and performance.

Light-duty Vehicle Manufacturers

- Support further controls on sulfur and establishing a distillation index cap on gasoline.
- Support the national ultra low sulfur diesel program and diesel fuel quality controls.

⁸ Refer to the World Wide Fuel Charter - August 2005

Engine Manufacturers

- Supported ultra low sulfur diesel program and emphasized their support for one national diesel fuel standard.

USER GROUPS

(Associations Representing the Trucking Industry and the Driving Public)

Representatives from user and consumer groups were primarily concerned over product availability and price:

- Interests focused on ensuring an uninterrupted availability of reasonably priced fuel.
- Contend that the existing patchwork of specialty fuel blends seems to have exacerbated fuel price volatility and contributed to regional disruptions in fuel supply.
- Concerns were expressed over state renewable fuel mandates and their potential impact on supply, price and product quality.
- The trucking industry supports uniform national diesel fuel requirements, and believes boutique fuels should be defined more broadly as a state fuel specification that limits fuel fungibility.

Stakeholder Materials

A complete set of materials submitted by the stakeholder participants is available on the EPA Boutique Fuels Task Force website. Interested parties may access this information at <http://www.epa.gov/otaq/boutique-task-force.htm>. This material, as well as that provided directly by the Task Force representatives has been accounted for in developing the statements, positions and recommendations and in making a determination on suggestions for additional informational needs.

VIII. EPA Recommendations and Observations

Boutique fuel programs are cost effective strategies that provide important environmental and public health benefits. However, EPA recognizes that a number of actions in the fuels area since 2001 have changed the boutique fuel landscape. These changes include the implementation of ultra-low sulfur fuel requirements across the country, EPA's provisions requiring removal of the oxygenate mandate and implementation of the federal renewable fuels standards, and other administrative actions EPA has taken to provide additional flexibility to the fuels system. At the same time, states are developing plans to demonstrate compliance with new air quality requirements.

Following careful review and consideration of available information and input from both the Task Force participants and stakeholders, EPA is submitting the following items for consideration by the President:

- Complete a comprehensive analytical assessment as required by EPA's Act to better define how boutique fuels impact air quality, cost, fungibility, and fuel supply.

- Implement, on a timely basis, the provisions in EPOA which address boutique fuels specifically, or could impact conditions concerning their use, including the state boutique fuel list, the renewable fuels program.
- Ensure that changes to the nation's suite of boutique fuels maintain or improve the air quality benefits the current programs provide to states.
- Analyze the potential for and possible impact of regional fuel programs including any need for new authority necessary to establish or approve such programs.
- Any changes in the boutique fuel requirements must maintain current air quality benefits and effectuate a positive net result, balancing consideration of product fungibility, overall supply, distribution, and cost. Supportable modifications should look to enhance product fungibility, overall supply (volume of available product), ease of distribution (access to and delivery of compliant product), and cost (maintaining or reducing the cost to produce and supply the product to market).

It should also be noted with reference to these items that Task Force participants commented that the boutique fuel in their market areas not only provided valuable air quality benefits, but generally had positive economic effects compared to products outside the boutique area. Thus there are varying views on the impact, if any, that reducing the number of boutique fuels may have on the nation's fuel situation. Any action taken has to be done in a thoughtful manner.

Additionally it should be reiterated that Task Force participants expressed concern over the statements made by industry stakeholders and strongly oppose any review and limitations on state renewable fuel requirements. State renewable fuel programs are not required to be approved under Clean Air Act Section 211(c)(4)(c) and therefore do not fall within EPA's definition of boutique fuels. Because of the varying stakeholder and participant views on the potential impact these programs may have on the national fuel supply and distribution system, EPA recommends that further evaluation be conducted as part of the EPA/DOE broader analysis.

The Task Force participants also recognize that market conditions have changed since EPA released the *Study of Unique Gasoline Fuel Blends "Boutique Fuels"* in October of 2001. A general recommendation from the Task Force participants, as supported by stakeholder participant comments, is to update the 2001 study or to prepare a new report, fully reflecting today's market situation and in consideration of planned and expected future changes. The Task Force encouraged the Agency to complete these evaluations as part of the studies required by EPOA.

The Agency and the Department of Energy will be jointly preparing and submitting to Congress a more comprehensive needs assessment. This assessment will be included in an August 2006 report to Congress. The report will include details assessing future analytical work required to accurately determine how best to address the requirements set forth in Section 1509 of EPOA 2005, whereby the Agency and DOE must prepare and submit a report by June 1, 2008, referred to as the *Fuel System Requirements Harmonization Study*. The importance of this work should not be underestimated, so completion of this work before 2008 is highly desirable. As part of

this effort, EPA and DOE shall actively engage Task Force participants and other interested stakeholders.

Changes and modifications to existing federal program requirements, as well as application of restrictions on allowable state fuel programs that have not been fully implemented will change the fuel market dynamics in the United States. Many Task Force participants and stakeholders urged that recently enacted changes, such as removal of the reformulated gasoline oxygenate mandate, implementation of the national renewable fuel standard, as well as future requirements, including new mobile source air toxic standards should be implemented as provided for in the Energy Policy Act of 2005. Many Task Force participants also advocated that a careful assessment be completed concerning such changes and their projected impact on the US fuel market. In addition, many Task Force participants argued for flexibility in fuel choices in different states and areas of the country.

A critical issue for the states is that any change in the boutique fuel slate or applicable authorities must be done in a manner that air quality benefits resulting from boutique fuel programs will, at a minimum, at least be maintained. Benefits from these programs have served an important role in the states' efforts at meeting national air quality standards, and these benefits are expected to be as important to future attainment strategies. Further, while the task force received some general input from industry stakeholders with some suggesting a potential connection between boutique fuels and supply and price concerns, this input was not supported by any documentation in this process. EPA's assessments focus on the cost to produce fuels. These assessments indicate that boutique fuels have a very small impact on production costs. EPA does not conduct market price analysis of boutique fuels. There are many factors and variables that affect the price of fuel with the production cost being one of those.

It is also noted that further opportunities to reduce the actual number of boutique fuel programs may exist. Specifically, the EPA heard from a number of participants and other stakeholders that one area for additional study is the ability of states to adopt regional fuel programs. Currently, the Clean Air Act and EPAct limit options related to the creation of regional fuels. States within the Ozone Transport Region have the ability, under the Energy Policy Act of 2005, to adopt Reformulated Gasoline as a regional fuel and are deliberating this action now. We understand other states are also reviewing the costs and benefits of such action. Providing one fuel across a broader region could help address fungibility issues, though there could be other concerns that would need to be addressed. Task Force participants encouraged the Agency to evaluate in the forthcoming studies how the application of regional strategies could address existing and future air quality concerns, as well as provide an avenue to alleviate concerns over product fungibility, supply, distribution and costs. Task Force participants expressed opposition to limitations on their authority to adopt provisions that are vital to meeting their air quality standards.

Some industry stakeholders raised the question about how state requirements for renewable fuel provisions should be addressed in the future. After conducting analyses, on the potential impacts and benefits, many states are actively engaged in promoting

greater use of renewable fuels through minimum volume requirements, tax incentives, and other mechanisms. There was concern that some of these programs could have an impact on fuel fungibility in light of the development of the national renewable fuels program currently being developed. While this particular issue is outside the scope of this Task Force, we believe it is an important question and recommend the EPA/DOE *Fuel System Requirements Harmonization Study* as the most appropriate mechanism to take such action to evaluate such issues. Additional stakeholder involvement, particularly from the states, on this issue will also be critical. In the course of the study, EPA and DOE will actively engage and seek input from interested state participants from the Task Force as well as other interested stakeholders.

IX. Summary of Comments and Additional Opinions

Upon completion of the Task Force meetings, a draft Report to the President was prepared by EPA staff and presented to Task Force participants for review. Responses included general observations, recommendations, and editorial suggestions to improve the Report, and suggestions regarding further actions, additional information needs, and further points for analysis.

A complete set of materials submitted by state participants is available on the EPA Boutique Fuel Task Force website at <http://www.epa.gov/otaq/boutique-task-force.htm>. The table below provides a brief summary of the comments. These comments were considered by EPA in preparation of the final version of this Report to the President.

Summary of State Comments on Draft Boutique Fuels Task Force Report

| State | Comments |
|-------------|--|
| Arizona | <ul style="list-style-type: none"> • Supports a far more deliberative and rigorous review process with detailed evaluations, such as the EPAct reports call for. • Supports consideration of regional fuels. • Opposes limits on state authority to adopt fuel programs to meet air quality needs. • Opposes interference in state renewable fuel requirements. • Report does not mention factors that impact gas prices more than boutique fuels, such as erosion of vertical integration due to mergers or delivery infrastructure problems. |
| Connecticut | <ul style="list-style-type: none"> • As a strategy to achieve cleaner air, supports RFG as a regional fuel for OTC states. • While the RFG oxygen mandate is gone, energy providers have invested in the infrastructure to supply ethanol in the state. Oxygenates would be required by state regulations if the carbon monoxide standard was violated. • State fuel programs are critical to reducing air pollution • Regional strategies are important because local control measures don't adequately address transport. • Clean fuel programs are not a major cause of increased prices, and may be equate to less than a fraction of 1% of the cost of production. |

| State | Comments - Continued |
|----------------------|--|
| Georgia | <ul style="list-style-type: none"> • Protect state authority to implement fuel programs to address air quality needs. • Convene a state/EPA workgroup to update the 2001 boutique fuels report. • Convene a state/EPA workgroup to develop fuel options, including regional fuel options, which states could implement. • Fuel options should maintain or improve air quality, increase fungibility, and reduce costs. |
| Kansas | <ul style="list-style-type: none"> • The boutique fuel used in Kansas City is a critical part of the effort to maintain ozone compliance. Any action that eliminates this emission reduction strategy would be harmful to the air quality and public health of the Kansas City area. • Any review of renewable fuels should be performed in a deliberate, thoughtful manner, because these programs are an important economic and environmental issue in a number of states. |
| Louisiana | <ul style="list-style-type: none"> • States should have flexibility with fuel choices to attain air quality benefits. • Regional fuels seem supportable, and may offer broader environmental benefits with less disruption to fuel suppliers and the distribution network. • Supports clean renewable fuels. • Believes EPA studies will support the need for flexibility in the fuel system and greater use of renewables. |
| Maine | <ul style="list-style-type: none"> • Supports long-term strategy to adopt regional Northeastern fuel. • Concerned that measures to limit boutique fuels could jeopardize Maine's ozone strategy, disrupt fuel supplies and cause price instability. • Does not agree their fuel is a boutique. |
| Michigan | <ul style="list-style-type: none"> • No evidence low RVP gas has contributed to high gas prices in southeast Michigan. • States should retain authority to use boutique fuels as needed to meet and maintain NAAQSs. • Any decisions regarding changes to EPA boutique fuel requirements should only be made following an updated comprehensive fuels study. |
| Missouri | <ul style="list-style-type: none"> • Renewable fuels are outside the scope of this report. • Does not agree that renewable fuels are a growing concern. except to certain members of the petroleum industry. |
| New Hampshire | <ul style="list-style-type: none"> • Data and analysis, not just observations, should support assertions that differ from the 2001 report. • Supports statutory/regulatory changes necessary to establish regional fuel programs. |

| State | Comments - Continued |
|--------------|---|
| New Jersey | <ul style="list-style-type: none"> • Expand list of state clean fuels available under EPA Act to include California Cleaner Burning Gasoline and authorize all states to adopt fuel. • Allow all areas – attainment and nonattainment to opt-in-to federal RFG • Facilitate ability of states and localities to adopt cleaner regional fuels allowing attainment areas to participate. |
| Oklahoma | <ul style="list-style-type: none"> • Supports state authority to choose fuel programs to support air quality needs. • Supports in-depth analysis of boutique fuels with more current data. |
| Oregon | <ul style="list-style-type: none"> • Opposes restricting state authority to adopt biofuel standards. • Opposes attempts to limit state fuel options. • More national and regional options for clean fuels are acceptable for consideration., however this should not limit state authority to consider other fuels |
| Pennsylvania | <ul style="list-style-type: none"> • Report should result only in actions that maintain or improve air quality. • Do not interfere with state development of renewable fuel standards. • Do not restrict state authority to implement fuel programs. |

X. Appendices

Appendix 1

Relevant Fuel Actions Taken Since 2001

Since the publication of the 2001 EPA Boutique Fuels Report, several significant changes have occurred in the US gasoline market. These changes have and will continue to change the landscape of the fuel production and distribution system in the US. These actions, along with actions to ease the seasonal switch from winter to summer gasoline and to lessen stresses on the gasoline supply system, will impact the positions, options and recommendations set forth by the Task Force in this report. A summary of these actions are listed below.

Seasonal Transition Actions

The Agency's 2001 study specifically outlined actions that EPA would take in the near-term to provide for a more orderly transition from winter-to-summer grade RFG every spring. In summary, EPA:

- Allowed fuel producers more flexibility in meeting fuel specifications than they previously had for their initial transition to summer fuel.
- Allowed certain gasoline types to be reclassified as RFG, thus making it easier to address localized issues that arise when there is an unexpected disruption in the distribution system
- Simplified certain RFG accounting and reporting requirements.

Tank Turnovers

On December 28, 2001, the Agency published provisions to allow parties to change the service of a tank where residual amounts (gasoline heel) of gasoline remain in the tank, subject to certain conditions and constraints. The Agency also published provisions to provide an additional option for oxygenate blenders who change the service of a tank before or after the VOC season, where the oxygenate blender is unable to meet the conditions and constraints of the new tank turnover provisions without taking the tank out of service. Loosening the constraints on tank turnovers has provided parties with greater flexibility to change from one type of gasoline to another in response to available gasoline supplies.

Procedures for Blending Butane into RFG and Conventional Gasoline

On December 15, 2005, EPA published a rule to allow butane blenders to blend butane into conventional or RFG under an alternative sampling and testing option subject to certain specified conditions. This alternative approach provides an easier way for

parties to blend butane into gasoline, which has the potential for increasing gasoline supplies.

Procedures for Using Imported Gasoline as a Blendstock

On December 15, 2005, EPA published a rule to allow importers to conduct remedial blending of off-spec imported gasoline by treating the imported gasoline as a blendstock, subject to certain requirements and limitations. These provisions will provide importers with additional flexibility to respond to market demands upon finalization later this year.

Provisions for Transmix Processors and Blenders

In a rule published in June 2006, the Agency provides a more flexible approach for transmix processors and blenders to comply with requirements under the RFG rule as well as the Tier 2 gasoline sulfur standards. This will enable parties to more readily use transmix to produce gasoline which has the potential to increase gasoline supplies.

Alternative Quality Assurance Procedures for Refiners of RBOB

Reformulated gasoline blendstock for oxygenate blending, or RBOB, is a product that becomes RFG upon the addition of an oxygenate which is added downstream from the refiner of the RBOB. Under the current regulations, RBOB refiners are required to conduct quality assurance sampling and testing at the downstream oxygenate facility to ensure that the proper amount of oxygenate is added by the oxygenate blender. This requirement is difficult, if not impossible, for many refiners to fulfill, especially where the gasoline is shipped through a pipeline and the oxygenate blender who ultimately blends the oxygenate into the RBOB is unknown to the refiner. To address this situation, EPA published a rule in June 2006 which provides RBOB refiners with an alternative method of fulfilling the quality assurance requirement. Providing this alternative means of complying with quality assurance requirement enables more refiners to produce RBOB for ethanol blending, which should have a positive effect on refiners' ability to respond to market needs.

Requirements for Importing Conventional Gasoline by Truck

On December 15, 2005, the Agency published a rule which provides an alternative sampling and testing approach which allows truck importers to demonstrate compliance with the conventional gasoline standards based on test results from the truck loading terminal instead of the truck or truck compartments, subject to certain requirements and limitations. This flexibility makes importation of conventional gasoline into the United States by truck easier and less costly, resulting in increased access to imported conventional gasoline.

Appendix 2

Summary of Fuel Options from 2001 EPA Study of Unique Gasoline Fuel Blends (Boutique Fuels)

3-Fuel Option

The first option identified consisted of a menu for States and localities to choose from of 9.0 psi RVP conventional gasoline, 7.8 psi RVP conventional gasoline, and either RFG or Federal CBG. Because this would be a 49 State program, California CBG would remain an option for California.⁹ It did not preclude fuel programs that are put in place for reasons other than air quality, and as a result programs like the oxygenated fuel/ethanol requirement in Minnesota and other states would remain options as well. Under this option, in order to ensure no emission backsliding, it was assumed that States and localities would choose a fuel type from the menu with the same or better emission performance compared to the fuel they receive today. Consequently, the 7.2 and 7.0 RVP areas would be consolidated into RFG or CBG as applicable. It is important to note, however, that while this option was referred to as the 3-fuel option due to its 3 basic fuel requirements for the 49 states, due to variations in oxygenate requirements and use there were at that time still as many as 8 different fuel program requirements and 12 different fuel grades distributed nationwide under this option. Not all regions would see all of the fuels, and it still represented a large reduction in the number of fuel grades nationwide compared to the 2006 reference case.

2-Fuel Option

The second option identified would reduce the menu for States and localities to just conventional gasoline and either RFG or CBG. As with the 3-fuel option, this would be a 49 State program and California CBG would remain an option for California and programs like state oxygenated fuel/ethanol requirement would remain options for States as well. Consistent with the environmental goals, all current RVP control areas were assumed to be consolidated into RFG or CBG as applicable. Setting aside a possible benzene standard for conventional gasoline, less than 13 percent of the gasoline pool would be impacted by these changes. While this option was referred to as the 2-fuel option, due to differences in oxygenate requirements and use nationwide at that time, there would still be as many as 6 different fuel program requirements with 9 different fuel grades distributed nationwide.

Federal Cleaner Burning Gasoline

The third option required Federal cleaner burning gasoline (CBG) across 49 States. All conventional gasoline as well as State RVP control programs would be replaced with Federal CBG. California CBG would remain in place in California. This option would impact in excess of 70 percent of the gasoline pool. This option was not

⁹ California has its own waiver of preemption for fuel controls under the CAA, and further has its own refining system which is mostly separate from the rest of the U.S.

evaluated with RFG retaining the oxygen requirement. Such a large increase in the amount of oxygenate required across the country would have been difficult to analyze.

California Cleaner Burning Gasoline

The fourth option required California CBG Nationwide. As there is no oxygen requirement as part of the California CBG program, this option assumed that a renewable fuel requirement was put in place as part of a national program. This option would impact approximately 89 percent of the gasoline pool.