

PETITION FOR RECONSIDERATION OR RULEMAKING

submitted on behalf of

**URBAN AIR INITIATIVE, INC.; THE FARMERS' EDUCATIONAL &
COOPERATIVE UNION OF AMERICA, D/B/A NATIONAL
FARMERS UNION; FARMERS UNION ENTERPRISES, INC.; BIG
RIVER RESOURCES, LLC; GLACIAL LAKES ENERGY, LLC; CLEAN
FUELS DEVELOPMENT COALITION; FAGEN, INC.; JACKSON
EXPRESS, INC.; JUMP START STORES, INC.; LITTLE SIOUX CORN
PROCESSORS, LLC; and SOUTH DAKOTA FARMERS UNION,**

Concerning the U.S. Environmental Protection Agency's

Modifications to Fuel Regulations To Provide Flexibility for E15;

Modifications to RFS RIN Market Regulations

Docket ID No. EPA-HQ-OAR-2018-0775

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PETITION FOR RECONSIDERATION OR RULEMAKING

INTRODUCTION & EXECUTIVE SUMMARY

Pursuant to § 307(d)(7)(B) of the Clean Air Act and § 553(d) of the Administrative Procedure Act (“APA”), Petitioners Urban Air Initiative, Inc.; The Farmers’ Educational & Cooperative Union of America, d/b/a National Farmers Union; Farmers Union Enterprises, Inc.; Big River Resources, LLC; Glacial Lakes Energy, LLC; Clean Fuels Development Coalition; Fagen, Inc.; Jackson Express, Inc.; Jump Start Stores, Inc.; Little Sioux Corn Processors, LLC; and South Dakota Farmers Union, respectfully petition for reconsideration of EPA’s *Modifications to Fuel Regulations To Provide Flexibility for E15* (the E15 Rule), or for rulemaking.

Petitioners are separately challenging the E15 Rule’s interpretation of the Clean Air Act’s sub-sim law (§ 211(f)) in the Court of Appeals D.C. Circuit. Petitioners disagree with EPA’s assertion in the E15 Rule that the sub-sim law controls the concentration of ethanol in gasoline. This petition, however, does not raise that issue. It is instead focused on a narrower set of issues that are appropriate for the Agency’s reconsideration or rulemaking in the first instance. Nothing in this petition should be construed as conceding or in any way endorsing EPA’s authority to control the concentration of ethanol in gasoline under the sub-sim law.

I. Petitioners respectfully request that EPA allow the sale of mid-level ethanol-gasoline blends for use in flex-fuel vehicles.

For years, EPA has allowed fuel retailers to sell mid-level ethanol-gasoline blends (E16–E50) for use in flex-fuel vehicles. In 2006, Margo Oge, then Director of EPA’s Office of Transportation and Air Quality (OTAQ), assured fuel retailers that E16–E50 blends “are not prohibited under the Clean Air Act” when sold through blender pumps for use in flex-fuel vehicles.¹ Director Oge’s letter was later codified in a regulation providing that “[n]o person shall . . . [b]e prohibited from manufacturing, selling, introducing, or causing or allowing the sale or introduction of gasoline containing greater than 10 volume percent ethanol into any flex-fuel vehicle.”² That rule remains in effect today. These assurances, coupled with billions of dollars in government-sponsored infrastructure investments, have allowed the creation of a significant retail market for E16–E50 blends in many parts of the country.³

¹ Letter from Margo Oge, Dir., Office of Transp. & Air Quality, EPA to Dawna Leitzke, Exec. Dir., S. Dakota Petroleum Marketers Ass’n (Nov. 28, 2006) (2006 Oge Letter) (Exhibit A); *see also* Letter from Adam Kushner, Dir., Air Enforcement Div., to Bob Greco, Dir., Am. Petroleum Inst. (July 31, 2008) (2006 Kushner Letter) (The Clean Air Act does not . . . prohibit retail gasoline stations from selling gasoline blended with up to 85% ethanol for use in flexible-fueled vehicles or engines.”).

² 40 C.F.R. § 80.1504(a)(3).

³ *See, e.g.*, 2019 Minnesota E85 + Mid-blends Station Report, <http://mn.gov/commerce-stat/pdfs/e85-fuel-use-2018.pdf>.

In the E15 Rule, EPA disregards these legal assurances and states that E16–E50 blends are no longer lawful.⁴ Arguing that its new position was foreordained by existing rules, EPA changed its interpretation of the law without even acknowledging any change in its legal position and without accepting public comments. That is arbitrary and capricious.

Far from being foreordained, EPA’s new policy rests on a novel and convoluted reading of rules promulgated long before retailers began selling E16–E30 blends. These rules existed in 2006, when Director Oge expressly approved retailers’ practice of using blender pumps to sell E16–E50 blends for use in flex-fuel vehicles. After years of industry reliance on Director Oge’s guidance, EPA staff informally began to suggest that the Agency’s rules forbade retailers from selling E16–E50 blends. But the informal interpretation had no legal effect, and EPA’s staff acknowledged that fuel retailers were “unaware” of the staff’s new view of the law.⁵

EPA has now publicly adopted the previously informal interpretation as official Agency policy. In the E15 Rule, EPA forbids the sale of E16–E50 blends, even for use in flex-fuel vehicles.⁶ EPA reasons as follows:

- (i) Major premise: E16–E50 blends are regulated “gasoline” for purposes of the gasoline fuel and fuel additive rules.⁷
- (ii) Minor premise: Retailers blending E16–E50 are not exempt from the definition of “fuel manufacturer,”⁸ because they are not blending an “allowable amount” of ethanol under the Clean Air Act’s sub-sim law, § 211(f), even when they sell these fuels for use in flex-fuel vehicles.⁹

⁴ See *Modifications to Fuel Regulations To Provide Flexibility for E15; Modifications to RFS RIN Market Regulations*, Proposed Rule, 84 Fed. Reg. 10,584, 10,594 (March 21, 2019) (Proposed E15 Rule); *Modifications to Fuel Regulations To Provide Flexibility for E15; Modifications to RFS RIN Market Regulations*, 84 Fed. Reg. 26,980, 27,009 (June 10, 2019) (E15 Rule); *Modifications to Fuel Regulations To Provide Flexibility for E15; Modifications to RFS RIN Market Regulations: Response to Comments*, EPA-420-R-19-004 (May 2019), at 53 (E15 Response to Comments).

⁵ Jeff Herzog, E51-83 and E16–E50 (June 4, 2013), at 15 (Exhibit B).

⁶ E15 Response to Comments, *supra* note 4, at 53 (stating that “gasoline-ethanol blends containing up to 50 volume percent ethanol [are treated] as ‘gasoline’ for purposes of complying with the regulations at 40 CFR parts 79 and 80,” and that that is true “regardless of whether” the fuel “is labeled for use in gasoline-fueled vehicles and engines or flexible-fueled vehicles”).

⁷ *Id.*

⁸ 40 C.F.R. § 79.2(d) (“Fuel manufacturer means any person who, for sale or introduction into commerce, produces, manufactures, or imports a fuel or causes or directs the alteration of the chemical composition of a bulk fuel, or the mixture of chemical compounds in a bulk fuel, by adding to it an additive, *except*: . . . (2) A party (other than a fuel refiner or importer) who adds an oxygenate compound to fuel in any otherwise allowable amount is not thereby considered a fuel manufacturer.” (emphasis added)).

⁹ E15 Rule, *supra* note 4, 84 Fed. Reg. 27,021 (defining substantially similar to Tier 3 certification fuel); *see also* Proposed E15 Rule, *supra* note 4, 84 Fed. Reg. at 10,594 (“A party who unlawfully adds an oxygenate compound in a volume that exceeds the oxygen content limit in the interpretative definition of ‘substantially

- (iii) Conclusion: Retailers that sell E16–E50 blends are subject to the fuel registration rules that apply to gasoline “fuel manufacturers,” even when they sell these blends for use in flex-fuel vehicles.

Under EPA’s new approach, retailers that sell E16–E50 blends for use in flex-fuel vehicles are also considered “refiners” under EPA’s gasoline quality rules, for essentially the same reasons.¹⁰

Saying that fuel retailers are gasoline fuel manufacturers and refiners is tantamount to saying they may not sell E16–E50 blends at all. As gasoline fuel manufacturers, retailers may only sell registered gasoline, and the E15 Rule makes it impossible for E16–E50 blends to be registered.¹¹ As gasoline fuel manufacturers, retailers are also prohibited from selling gasoline “fuel” that is not “substantially similar” to a vehicle emissions-certification test fuel (“certification fuel”).¹² And under the E15 Rule’s new definition of “substantially similar,” gasoline-ethanol blends must contain “no more than 15 volume percent ethanol” to be “substantially similar” to a gasoline certification fuel.¹³ E16–E50 blends do not comply with this ethanol concentration limit. It follows that, under the E15 Rule, fuel retailers may not sell E16–E50 blends for use in any vehicle or engine. And even if they could sell these blends, as a practical matter, retailers could never comply with fuel quality compliance requirements intended for full-fledged refiners.

EPA’s new interpretation is unfair to retailers who have invested in blending infrastructure in reliance on the Agency’s past assurances that E16–E50 blends legally could be sold for use in flex-fuel vehicles. EPA’s new interpretation is also counterproductive. When E16–E50 blends are made using certified gasoline and denatured fuel ethanol blendstocks, the result is a clean, high-octane fuel that meets EPA’s gasoline quality standards for benzene, sulfur, and volatility.¹⁴ Flex-fuel vehicles are certified to operate on any blend between E0 and E85, so there is no reason to expect fuel-related compatibility problems in these vehicles.¹⁵

similar’ or the CAA sec. 211(f)(4) waiver condition . . . is a fuel manufacturer.”); E15 Response to Comments, *supra* note 4, at 53 (that is true “regardless of whether” the fuel “is labeled for use in gasoline-fueled vehicles and engines or flexible-fueled vehicles”).

¹⁰ See E15 Response to Comments, *supra* note 4, at 53; see also 40 C.F.R. § 80.2(h), (i), (jj), (ll), (mm).

¹¹ 42 U.S.C. § 7545(a); 40 C.F.R. § 79.11.

¹² 42 U.S.C. § 7545(f)(1).

¹³ E15 Rule, *supra* note 4, 84 Fed. Reg. 27,010.

¹⁴ See *Renewables Enhancement and Growth Support Rule*, Proposed Rule, 81 Fed. Reg. 80,828, 80,853 (Nov. 16, 2016) (Proposed REGS Rule) (“E16–50 has been assured to [have no atypical elements] by the current provisions that apply the requirements applicable to gasoline to these blends and the fact that it is typically blended from E51–83 and E10.”).

¹⁵ 2008 Kushner Letter, *supra* note 1, at 1 n.2 (“A ‘flexible-fueled vehicle or engine’ refers to a motor vehicle or nonroad engine that has been certified by EPA to meet emissions standards using E85 . . . gasoline without ethanol, or any intermediate combination of gasoline and ethanol.”).

Interpreting fuel regulations to prohibit E16–E50 blends needlessly outlaws an established market that poses no risk to public health or welfare.

Other more sensible interpretations of EPA’s existing regulations are available.

First, EPA should reconsider its minor premise. Retailers that sell E16–E50 blends for use in flex-fuel vehicles are not gasoline “fuel manufacturers”; they are gasoline oxygenate blenders.¹⁶ Consistent with Director’s Oge’s 2006 letter, E16–E50 blends contain an “allowable amount” of ethanol for use in flex-fuel vehicles under the Clean Air Act. It follows that retailers that make E16–E50 blends are oxygenate blenders, not gasoline “fuel manufacturers.”¹⁷

Second, and in the alternative, EPA should reconsider its major premise. To be “gasoline,” E16–E50 blends must be “commonly or commercially known or sold as” gasoline.¹⁸ EPA has never explained why it thinks E16–E50 blends are “commonly or commercially known or sold as” gasoline, and the available evidence shows just the opposite.

Either of these readings would allow fuel retailers to continue selling E16–E50 for use in flex-fuel vehicles. EPA should reconsider its interpretation and adopt one of these readings.

II. Petitioners also request that EPA reconsider its revised definition of “substantially similar” to expressly allow the use of E15 in pre-2001 flex-fuel vehicles.

EPA’s interpretative rule allows the use of E15 only “in light-duty vehicles manufactured after model year 2001.”¹⁹ It also requires plans to ensure “that the E15 is only introduced into commerce for use in model year 2001 and newer light-duty vehicles.”²⁰ The rule makes no exception for flex-fuel vehicles produced before model year 2001, even though they were certified to operate on E15. EPA should correct this oversight and allow the use of E15 in model year 2000 or older flex-fuel vehicles.

EPA should also take the opportunity to correct its erroneous limitation of the sub-sim interpretation to “light-duty vehicles manufactured after model year 2001.”²¹ EPA obviously

¹⁶ 40 C.F.R. § 79.2(d)(2) (“A party (other than a fuel refiner or importer) who adds an oxygenate compound to fuel in any otherwise allowable amount is not thereby considered a fuel manufacturer.”).

¹⁷ For the same reason, retailers that sell E16–E50 are “oxygenate blenders” and “ethanol blenders” under EPA’s fuel quality rules, not “refiners.” See *infra* p.9.; see also 40 C.F.R. § 80.2(h), (i), (jj), (ll), (mm).

¹⁸ 40 C.F.R. §§ 79.32(a)(1), 80.2(c).

¹⁹ E15 Rule, *supra* note 4, 84 Fed. Reg. at 27,021. As discussed in the following paragraph, the reference in the sub-sim interpretive rule should be to vehicles produced “after model year 2000,” not 2001.

²⁰ *Id.*

²¹ *Id.*

meant “after model year 2000,” since EPA’s findings about E15 apply to “MY2001 and newer light-duty vehicles.”²²

III. Petitioners request that EPA allow the use of natural gasoline in all gasoline-ethanol blends.

EPA’s final rule interprets its regulations to ban the use of uncertified natural gasoline blendstocks for use in gasoline-ethanol blends.²³ By EPA’s estimate, “approximately 50 percent of stations offering E15 make E15” with natural gasoline.²⁴ All of those retailers must now cease using natural gasoline or cease selling E15 blends. Yet EPA claims that it is not revising “any requirements applicable to blender pumps,” and that “addressing this issue is beyond the scope of the rulemaking.”²⁵

EPA should allow the use of natural gasoline, whether in the context of the E15 rulemaking or a new rulemaking. EPA could do so by promulgating standards for the ethanol parent blends used to make gasoline-ethanol blends through blender pumps. EPA’s proposed fuel standards in the Renewables Enhancement and Growth Support (REGS) Rule would have addressed this problem. Allowing the use of natural gasoline with proper regulatory safeguards would lower fuel costs while maintaining the environmental performance of the Nation’s transportation fuels.

BACKGROUND

A. The Clean Air Act’s Regulatory Scheme for Fuels and Fuel Additives.

Under § 211 of the Clean Air Act, EPA has authority to regulate fuels and fuel additives. EPA has promulgated regulations governing fuels and fuel additives in Title 40, Parts 79 and 80, of the Code of Federal Regulations. These regulations impose extensive requirements on gasoline “fuel manufacturers” and “refiners.” EPA now claims that retailers that sell E16–E50 blends are subject to these requirements.

1. Sub-Sim Law

In 1977, Congress enacted § 211(f) of the Clean Air Act, known as the sub-sim law.²⁶ As amended in 1990, paragraph (1) of the sub-sim law currently provides:

Effective upon November 15, 1990, it shall be unlawful for any manufacturer of any fuel or fuel additive to first introduce into commerce, or to increase the

²² *Id.* at 26,982; *cf.* 40 C.F.R. § 80.1504(a)(1).

²³ E15 Response to Comments, *supra* note 4, at 53 (arguing that the use of natural gasoline is “illegal” but contending that this interpretation “is not novel or new”).

²⁴ E15 Rule, *supra* note 4, 84 Fed. Reg. at 27,010.

²⁵ E15 Response to Comments, *supra* note 4, at 53.

²⁶ *See* Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 222, 91 Stat. 685, 763–64 (1977).

concentration in use of, any fuel or fuel additive for use by any person in motor vehicles manufactured after model year 1974 which is not substantially similar to any fuel or fuel additive utilized in the certification of any model year 1975, or subsequent model year, vehicle or engine under section 7525 of this title.²⁷

The E15 Rule promulgates a new definition of “substantially similar.” This new definition limits gasoline to “no more than 15 volume percent ethanol.”²⁸

2. Fuel and Fuel Additive Registration

Under § 211(a) of the Clean Air Act, EPA “may by regulation designate any fuel or fuel additive” for registration.²⁹ Once a fuel or fuel additive is designated, EPA may prescribe a date after which “no manufacturer or processor of any such fuel or additive” may sell the fuel or fuel additive unless it was registered with EPA.³⁰ Under § 211(b), EPA may require manufacturers “to conduct tests to determine potential health effects” before registering a fuel or fuel additive, and it may require them to provide information to help EPA determine “the effect of [a] fuel and fuel additive on the emission control performance of any vehicle or vehicle engine.”³¹

EPA promulgated its registration regulations in 1975.³² EPA designated “motor vehicle gasoline” as a fuel and required regulated “fuel manufacturers” to register their motor vehicle gasoline.³³ EPA defined “motor vehicle gasoline” as any fuel that is “commonly or commercially known or sold as motor vehicle gasoline.”³⁴

In the Clean Air Act Amendments of 1977, Congress required EPA to promulgate testing protocols for the registration of fuels and fuel additives.³⁵ In response, EPA promulgated detailed emissions and health-effects testing protocols.³⁶

²⁷ 42 U.S.C. § 7545(f)(1)(B).

²⁸ E15 Rule, *supra* note 4, 84 Fed. Reg. at 27,021.

²⁹ 42 U.S.C. § 7545(a).

³⁰ *Id.*

³¹ *Id.* § 7545(b).

³² *Registration of Fuels and Fuel Additives*, 40 Fed. Reg. 52,009 (Nov. 7, 1975).

³³ *Id.* at 52,014.

³⁴ *Id.*, *codified at* 40 C.F.R. § 79.32(a).

³⁵ 42 U.S.C. § 7545(e).

³⁶ *Fuels and Fuel Additives Registration Regulations*, 59 Fed. Reg. 33,042 (June 27, 1994), *codified at* 40 C.F.R. Part 79, Subpart F.

EPA further amended its fuel registration requirements in 1997 to “ease regulatory burdens.”³⁷ Specifically, EPA exempted from the definition of “fuel manufacturer” “all entities whose only ‘manufacturing’ activity is the blending of oxygenate,” in light of the “unique market structure for ethanol blending activities.”³⁸

To register motor vehicle gasoline under the current rules, fuel manufacturers must file an application making certain assurances to EPA.³⁹ Among other things, manufacturers must name each additive “that will or may be used” in the fuel, and the fuel additive’s range of possible concentrations in the fuel. Manufacturers must also show that the fuel is “substantially similar” to any certification test fuel, or show that the fuel has obtained a waiver from the “substantially similar” requirement.⁴⁰ And manufacturers must show, “or reference prior submissions” that show, that the fuel has satisfied EPA’s registration testing requirements.⁴¹

To date, only gasoline containing up to 15% ethanol has satisfied EPA’s registration testing requirements and been registered.⁴² Under EPA’s registration rules, motor vehicle gasoline with more than 15% ethanol would be a “new” unregistered gasoline product.⁴³ Such a fuel could not be registered as gasoline because it is not “substantially similar” under EPA’s new interpretive rule,⁴⁴ and because it has not satisfied EPA’s testing requirements. A gasoline

³⁷ *Registration of Fuels and Fuel Additives: Changes in Requirements, and Applicability to Blenders of Deposit Control Gasoline Additives*, 62 Fed. Reg. 12,564, 12,565 (Mar. 17, 1997).

³⁸ *Id.* at 12,566 (emphasis added); 40 C.F.R. § 79.2(d)(2) (“A party (other than a fuel refiner or importer) who adds an oxygenate compound to fuel in any otherwise allowable amount is not thereby considered a fuel manufacturer.”).

³⁹ 40 C.F.R. § 79.11.

⁴⁰ *Id.* § 79.11(i) (“The manufacturer of any fuel which will be sold, offered for sale, or introduced into commerce for use in motor vehicles manufactured after model year 1974 shall demonstrate that the fuel is substantially similar to any fuel utilized in the certification of any 1975 or subsequent model year vehicle or engine, or that the manufacturer has obtained a waiver under 42 U.S.C. 7545(f)(4).”).

⁴¹ *Id.* § 79.11(j).

⁴² Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80,842 (“Currently, the EPA has registered gasoline that contains up to 15 volume percent ethanol.”).

⁴³ Motor vehicle gasoline with more than 15% ethanol would be a “new” product because EPA’s rules do not allow it to be enrolled into any existing gasoline test group, like the E10 or E15 test groups. *See* 40 C.F.R. § 79.51(c)(3) (“A fuel product shall be considered new if . . . under the [grouping] criteria established by § 79.56, it cannot be enrolled in the same fuel/additive group with one or more currently registered fuels.”); *id.* § 79.56(e)(4)(A)(1)(iii) (requiring for each gasoline group containing ethanol and more than 1.5% oxygen, that the “representative to be used in testing” the fuel include “the highest actual or recommended concentration-in-use of the oxygenate . . . recorded in the basic registration of any member fuel or additive product”); *see also id.* § 79.51(h)(1) (requiring gasoline additives to be tested “at the maximum concentration recommended by the additive manufacturer”).

⁴⁴ E15 Rule, *supra* note 4, 84 Fed. Reg. 27,021 (defining sub-sim).

fuel manufacturer that sells unregistered gasoline risks a civil enforcement action under § 211(a) and § 211(d).⁴⁵

3. Fuel and Fuel Additive Controls and Prohibitions

Under § 211(c) of the Clean Air Act, EPA may, “from time to time . . . by regulation, control or prohibit” the “sale of any fuel or fuel additive”

(A) “if, in the judgment of the Administrator, any fuel or fuel additive or any emission product of such fuel or fuel additive causes, or contributes, to air pollution or water pollution (including any degradation in the quality of groundwater) that may reasonably be anticipated to endanger the public health or welfare, or

(B) if emission products of such fuel or fuel additive will impair to a significant degree the performance of any emission control device or system which is in general use, or which the Administrator finds has been developed to a point where in a reasonable time it would be in general use were such regulation to be promulgated.”⁴⁶

Over the years, EPA has adopted extensive regulations to control the characteristics of gasoline fuels and fuel additives under § 211(c) and other provisions of the Clean Air Act.⁴⁷ Gasoline “refiners” have extensive compliance obligations under the fuel quality control rules.⁴⁸ Refiners must demonstrate compliance with standards for controlling gasoline Reid Vapor Pressure (RVP),⁴⁹ sulfur,⁵⁰ and benzene,⁵¹ among other properties. To demonstrate compliance, each refiner must sample and test each batch of gasoline produced for conformity

⁴⁵ 42 U.S.C. §§ 7545(a), (d)(1). Every day of violation may result in a maximum civil penalty of \$47,357. *See* 40 C.F.R. § 19.4, Table 2 (adjusting civil penalties to account for inflation as of February 6, 2019). Although rarely used, criminal penalties may be available. *See* 42 U.S.C. § 7413(c)(2) (criminalizing the failure to knowingly fail to “file or maintain any . . . document” required by the Act); *see also* 18 U.S.C. § 3571 (setting forth applicable criminal penalties).

⁴⁶ 42 U.S.C. § 7545(c)(1).

⁴⁷ *See generally* 40 C.F.R. Part 80.

⁴⁸ EPA’s fuel quality control rules define “refiner” as “any person who owns, leases, operates, controls, or supervises a refinery.” 40 C.F.R. § 80.2(i). The rules define “refinery” to mean “any facility, including but not limited to, a plant, tanker truck, or vessel where gasoline or diesel fuel is produced, including any facility at which blendstocks are combined to produce gasoline or diesel fuel, or at which blendstock is added to gasoline or diesel fuel.” *Id.* § 80.2(h). “[B]lendstock” is defined to mean “any liquid compound which is blended with other liquid compounds to produce gasoline.” *Id.* § 80.2(s).

⁴⁹ 40 C.F.R. § 80.27.

⁵⁰ *Id.* § Part 80, Subparts H, O. The sulfur regulations in subpart O gradually supersede the regulations in subpart H. *See id.* § 1602.

⁵¹ *Id.* § Part 80, Subpart L.

with EPA’s gasoline standards, register as a refiner with EPA, submit periodic reports, and arrange for annual audits by an independent auditor.⁵²

Not all persons who fit the definition of “refiner” are treated as such under EPA’s gasoline regulations. Under EPA’s gasoline sulfur rules, for example, “oxygenate blenders . . . are not subject to the refiner or importer [sulfur] requirements, but are subject to the requirements and prohibitions applicable to downstream parties,” and other specific requirements.⁵³ Similarly, under the RVP rules, an “ethanol blender” may demonstrate compliance “by showing receipt of certification from the facility from which the gasoline was received.”⁵⁴

Any person that violates EPA’s controls or prohibitions under § 211(c) is subject to civil enforcement actions.⁵⁵

B. Until the E15 Rule, EPA Allowed the Sale of Mid-Level Ethanol Blends for Use in Flex-Fuel Vehicles.

Flex-fuel vehicles are vehicles certified to meet EPA’s emissions requirements using both a “high-level” ethanol test fuel (containing between 80% and 83% ethanol) and a gasoline test fuel.⁵⁶ This dual-certification procedure ensures that flex-fuel vehicles “are certified to meet emission standards on” E85 “and any intermediate combination of gasoline and ethanol.”⁵⁷

A gasoline-ethanol blend commonly known as “E85,” containing between 51% and 83% ethanol, has long been sold for use in flex-fuel vehicles.⁵⁸ Over a decade ago, fuel retailers also began using blender pumps to sell E16–E50 blends for use in flex-fuel vehicles. “The

⁵² See Proposed E15 Rule, *supra* note 4, 84 Fed. Reg. at 10,595.

⁵³ 40 C.F.R. § 80.1609. The subpart H sulfur regulations also exempt oxygenate blenders. *See id.* § 80.212 (“oxygenate blenders” are “not subject to the [sulfur] requirements. . . applicable to refiners”).

⁵⁴ *Id.* § 80.28(g)(8). An “ethanol blender means any person who owns, leases, operates, controls, or supervises an ethanol blending plant.” *Id.* § 80.2(v). “Ethanol blending plant means any refinery at which gasoline is produced solely through the addition of ethanol to gasoline, and at which the quality or quantity of gasoline is not altered in any other manner.” *Id.* § 80.2(u).

⁵⁵ 42 U.S.C. § 7545(d)(1). For purposes of assessing civil penalties, violations of “a regulatory standard based upon a multiday averaging period,” like the annual average benzene or sulfur standards, “shall constitute a separate day of violation for each and every day in the averaging period.” *Id.* Thus, a refiner that violates the average annual sulfur standard faces potentially up to \$17,285,305 in civil penalties (\$47,357 × 365 violations) for that single violation.

⁵⁶ 40 C.F.R. § 1065.725; Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80,853 (“Emissions certification testing of FFVs is required using both the test fuel specified for conventional gasoline vehicles and a high ethanol content FFV test fuel (E83).”).

⁵⁷ 2006 Oge Letter, *supra* note 1 (emphasis added).

⁵⁸ See ASTM D5798 – 19a.

typical current practice is that a blender pump mixes gasoline (E0 or E10) and E85 parent blends at different ratios to produce various E16–50 blends.”⁵⁹

The growth of E16–E50 sales has been encouraged by several factors. First, flex-fuel vehicle consumers want these blends. Many consumers prefer blends like E20 or E30 because unlike E85, they do not substantially lower vehicle fuel economy and vehicle range compared to gasoline.⁶⁰ Second, ethanol is a low-cost octane additive, so midlevel ethanol blends are often priced favorably compared to other high-octane gasoline blends produced with more costly fuel additives. Third, through the Biofuel Infrastructure Partnership (BIP), USDA has disbursed \$100 million in grants “dedicated to support higher ethanol blend utilization,” including an expansion of blender pumps.⁶¹ When matching funds are included, the estimated public and private BIP investment amounted to \$210 million, most of which funded blender pumps.⁶² Finally, and as particularly relevant here, the growth of E16–E50 blends has been encouraged by EPA’s repeated assurances to retailers that such blends could be sold for use in flex-fuel vehicles.

1. Director Oge’s 2006 Letter

In 2006, Dawna Leitzke, Executive Director of a South Dakota fuel retailers’ association, asked EPA for its “position on marketers selling ethanol blends other than E10 and E85 through blender pumps for use in FFVs.”⁶³

EPA’s response was unequivocal. Margo Oge, then Director of EPA’s Office of Transportation and Air Quality, wrote that:

“[B]lends such as E20 and E30 for use in FFVs . . . are covered under the emissions certification for an E85 FFV, and thus are not prohibited under the Clean Air Act. I am not aware of any federal law that prohibits the sale of such blends for use in FFVs.”⁶⁴

⁵⁹ Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80,842. “Blender pumps make mid-level ethanol blends by mixing two parent blends stored in different storage tanks.” *Id.* at 80,831 n.23.

⁶⁰ *See, e.g.*, John F. Thomas et al., Effects of High-Octane Ethanol Blends on Four Legacy Flex-Fuel Vehicles, and a Turbocharged GDI Vehicle 20 (Mar. 2015).

⁶¹ *Notice of Funds Availability (NOFA): Biofuel Infrastructure Partnership (BIP) Grants to States*, 80 Fed. Reg. 34,363, 34,364 (June 16, 2015); *see also* USDA, List of States Receiving BIP Grants, <https://www.fsa.usda.gov/programs-and-services/energy-programs/bip/index>.

⁶² Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80,831 n.23; USDA, USDA Announces \$210 Million To Be Invested in Renewable Energy Infrastructure Through the Biofuel Infrastructure Partnership (Oct. 28, 2015).

⁶³ 2006 Oge Letter, *supra* note 1.

⁶⁴ *Id.*; *see also* 2006 Kushner Letter, *supra* note 1 (The Clean Air Act does not . . . prohibit retail gasoline stations from selling gasoline blended with up to 85% ethanol for use in flexible-fueled vehicles or engines.”).

2. The 2011 Misfueling Rule

In the 2011 Misfueling Rule, EPA codified Director Oge’s 2006 policy statement by providing that “[n]o person shall . . . [b]e prohibited from manufacturing, selling, introducing, or causing or allowing the sale or introduction of gasoline containing greater than 10 volume percent ethanol into any flex-fuel vehicle, notwithstanding paragraphs (a)(1) and (a)(2) of this section.”⁶⁵ This rule remains in effect.

3. The Tier 3 Rule

In 2014, EPA finalized the Tier 3 Rule. In the Tier 3 Rule’s preamble, EPA said that:

Our various standards for gasoline currently apply to any fuel sold for use in motor vehicles, which is commonly or commercially known or sold as gasoline. In the fuel and fuel additive registration program, the gasoline family includes fuels composed of at least 50 percent clear gasoline by volume. As a result, our gasoline standards currently apply to E16–50 ethanol blends. However, additional regulatory provisions could be useful to facilitate compliance assurance if we are to continue to treat such mid-level ethanol blends as gasoline.⁶⁶

The Tier 3 Rule’s preamble thus announced EPA’s view that E16–E50 blends are “gasoline.” But the Tier 3 Rule’s preamble did not take any position on the minor premise that EPA adopted in the E15 Rule: whether retailers that sell E16–E50 are selling an “allowable amount” of ethanol when they sell E16–E50 blends for use in flex-fuel vehicles.

The only sign that some EPA staff entertained the view that retailers operating blender pumps were “fuel manufacturers” and “refiners” was contained in a slide deck prepared by EPA staff and submitted to the Tier 3 docket. The slide deck asserted, without any explanation, that retail “blenders” selling E16–E50 blends “*should be treated as refiners but they are unaware.*”⁶⁷ This lack of awareness should not be surprising, given EPA’s formal assurances that nothing in the Clean Air Act prevented retailers from selling E16–E50 blends through blender pumps for use in flex-fuel vehicles.⁶⁸

⁶⁵ *Regulation To Mitigate the Misfueling of Vehicles and Engines With Gasoline Containing Greater Than Ten Volume Percent Ethanol and Modifications to the Reformulated and Conventional Gasoline Programs*, 76 Fed. Reg. 44,406, 44,448 (July 25, 2011), as amended in 79 Fed. Reg. 42,128 (July 18, 2014), codified at 40 C.F.R. § 80.1504.

⁶⁶ *Control of Air Pollution From Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards*, 79 Fed. Reg. 23,414, 23,558 (Apr. 28, 2014) (Tier 3 Rule).

⁶⁷ Jeff Herzog, E51-83 and E16–E50, at 15 (June 4, 2013) (emphases added).

⁶⁸ Even if this document represented the views of the Agency, as opposed to the views of individual staff members, it was not published in the Federal Register, so retailers did not even have constructive “notice” of EPA’s interpretation of the law. See 44 U.S.C. § 1507.

As relevant to this petition, in the 2014 Tier 3 rulemaking, EPA also “updated the certification test fuel for Tier 3 certified motor vehicles and changed the certification test fuel from E0 to E10 to reflect the widespread use of E10 in the marketplace.”⁶⁹ The new Tier 3 gasoline test fuel contains 9.6 to 10% ethanol.⁷⁰

EPA did not define what range of gasoline-ethanol blends were “substantially similar” to the Tier 3 certification fuel in the Tier 3 Rule. Without an updated definition of “substantially similar,” fuel retailers had no reason to suspect that, in EPA’s opinion, E16–E50 blends might not contain an “allowable amount” of ethanol for use in flex-fuel vehicles or other vehicles. Hence, they had no reason to think they might be deemed gasoline “fuel manufacturers” instead of “oxygenate blenders.”

C. EPA No Longer Allows the Sale of Mid-Level Ethanol Blends for Use in Flex-Fuel Vehicles.

Until 2019, fuel retailers had every reason to think that E16–E50 blends could be lawfully sold for use in flex-fuel vehicles under the Clean Air Act. That is no longer the case. Ignoring past guidance, EPA’s E15 Rule adopts an interpretation of the sub-sim law and EPA’s regulations that makes it illegal for retailers to sell E16–E50 blends for use in any vehicle or engine, including flex-fuel vehicles.

1. The Proposed E15 Rule

In the proposed E15 Rule, EPA advanced the view that retailers that make E16–E50 blends are gasoline “fuel manufacturers” and “refiners.”⁷¹ According to this view, retailers that make E16–E50 blends do not blend an “allowable amount” of ethanol into gasoline under the sub-sim law, § 211(f). And because these retailers do not blend an “allowable amount” of ethanol, they are “fuel manufacturers”:

[O]nly parties who ‘add[] an oxygenate compound to fuel in any otherwise allowable amount’ are excluded from the definition of fuel manufacturer. This provision only allows the addition of oxygenate compounds up to the amount of any CAA sec. 211(f)(4) waiver, or any allowable oxygen content under our interpretation of the meaning of ‘substantially similar.’ A party who unlawfully adds an oxygenate compound in a volume that exceeds the oxygen content limit in the interpretative definition of ‘substantially similar’ or the CAA sec. 211(f)(4) waiver condition, or who adds anything other than an oxygenate compound allowed by the substantially similar interpretative rule, is a fuel manufacturer.⁷²

⁶⁹ Proposed E15 Rule, *supra* note 4 at 10,597; *see also* Tier 3 Rule, *supra* note 66, 79 Fed. Reg. at 23,810, *codified at* 40 C.F.R. § 1065.710(b)(2).

⁷⁰ 40 C.F.R. § 1065.710(b)(2).

⁷¹ Proposed E15 Rule, *supra* note 4, 84 Fed. Reg. at 10,594.

⁷² *Id.*; *see also* 40 C.F.R. § 79.2(d), (k) (defining these regulatory terms).

2. The Final E15 Rule

The final E15 Rule goes beyond the proposal, adopting the view that retailers may not sell E16–E50 blends *even for use in flex-fuel vehicles*.

The E15 Rule defines for the first time the range of fuels that are “substantially similar” to the Tier 3 certification fuel: under the new sub-sim interpretative rule, only gasoline-ethanol blends containing “no more than 15 volume percent ethanol” are “substantially similar” to the Tier 3 gasoline certification fuel.⁷³ Thus, under EPA’s new interpretation of its fuel and fuel additive regulations, retailers that sell E16–E50 blends are no longer adding an “allowable amount” of ethanol to gasoline, so they are gasoline “fuel manufacturers.”

EPA’s new position prohibiting the sale of E16–E50 blends for use in flex-fuel vehicles is confirmed by EPA’s response to comments. Referencing the views it took in “the Tier 3 final rule, the proposed REGS rule, and the proposal for this action,” EPA asserts that “gasoline-ethanol blends containing up to 50 volume percent ethanol [are treated] as ‘gasoline’ for purposes of complying with the regulations at 40 CFR parts 79 and 80.”⁷⁴ EPA also says that is true “regardless of whether” the fuel “is labeled for use in gasoline-fueled vehicles and engines or flexible-fueled vehicles.”⁷⁵

EPA’s citation to the proposed REGS rule is telling. In the proposed REGS Rule, EPA suggested that fuel retailers had to comply with these refinery rules even if they sold E16–E50 blends for use in flex-fuel vehicles.⁷⁶ EPA acknowledged that “E16–50 gasoline blends are currently produced for use in FFVs using blender pumps at fuel retailer facilities.”⁷⁷ But it suggested that “[b]ecause the EPA currently considers E16–50 to be gasoline[,] and blender pump operators mix E85 (a non-gasoline) with gasoline to produce E16–50, blender pump operators are gasoline refiners under our existing regulations.”⁷⁸ Moreover, EPA continued, retailers cannot avoid these regulations by selling fuel for use in flex-fuel vehicles: “[a]ll gasoline . . . is subject to all of the requirements applicable to gasoline because of its formulation, not because of its end use.”⁷⁹ In the proposal, EPA said that the regulations

⁷³ E15 Rule, *supra* note 4, 84 Fed. Reg. at 27,021. The proposed rule did not include a proposed interpretive rule defining “substantially similar.”

⁷⁴ Response to Comments, *supra* note 4, at 53.

⁷⁵ *Id.*

⁷⁶ Proposed REGS Rule, *supra* note 4, 81 Fed. Reg. at 80,842.

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Id.* at 80,863.

“cannot be circumvented by relabeling” gasoline for use in flex-fuel vehicles.⁸⁰ Commenters opposed EPA’s interpretation of the law,⁸¹ and the proposed REGS rule was never finalized.

In substance, the interpretation first suggested in the proposed REGS rule and now endorsed by EPA in the final E15 Rule is no different from saying that E16–E50 blends are now illegal, even for use in flex-fuel vehicles. Under the final E15 Rule, every person that makes E16–E50 is a gasoline “fuel manufacturer.” And gasoline fuel manufacturers must comply with the sub-sim law, § 211(f), which, under EPA’s interpretation, makes it illegal to sell E16–E50 blends for use in any vehicle or engine. Also, fuel manufacturers may not sell unregistered motor vehicle gasoline, and E16–E50 blends cannot be registered as motor vehicle gasoline.⁸² As a legal matter, therefore, EPA’s E15 Rule makes it categorically unlawful to sell E16–E50 blends.

PETITION

I. EPA SHOULD ALLOW THE SALE OF E16–E50 BLENDS FOR USE IN FLEX-FUEL VEHICLES.

EPA’s prohibition on the sale of E16–E50 blends for use in flex-fuel vehicles cannot be reconciled with EPA’s past guidance and existing rules. EPA should return to its past guidance.

Reconsideration is appropriate. It was “impracticable” for Petitioners to object to EPA’s prohibition of E16–E50 for use in flex-fuel vehicles during the E15 Rule’s “period for public comment.”⁸³ It did not become clear that EPA interpreted its rules to prohibit the sale of E16–E50 blends, even for use in flex-fuel vehicles, until EPA explained, in response to comments, that retailers that sell E16-E50 must follow the gasoline “fuel manufacturer” rules “regardless of whether” the fuel “is labeled for use in gasoline-fueled vehicles and engines or flexible-fueled vehicles.”⁸⁴ In any event, if EPA concludes that reconsideration is not proper, EPA should begin a new rulemaking to clarify that E16–E50 may be sold for use in flex-fuel vehicles.

⁸⁰ *Id.*

⁸¹ *See, e.g.*, Comments of Urban Air Initiative et al., on EPA’s Renewables Enhancement and Growth Support Rule 8–14 (Feb. 16, 2017).

⁸² There is a certain circularity to these prohibitions, because they all depend on the sub-sim law. Motor vehicle gasoline cannot be registered unless a fuel is “substantially similar” or has obtained a waiver under § 211(f)(4). 40 C.F.R. § 79.11(i). In addition, only “fuel manufacturers” are required to register fuel products under § 211(a), and whether retailers are “fuel manufacturers” depends on whether the gasoline-ethanol blends they make are “substantially similar.”

⁸³ 42 U.S.C. § 7607(d)(7)(B). Assuming, for the sake of argument, that EPA’s prohibition of E16–E50 blends for use in flex-fuel vehicles follows automatically from the Tier 3 rule, the E15 Rule provides new “grounds” for reconsideration of the Tier 3 Rule. *Id.*

⁸⁴ Response to Comments, *supra* note 4, at 53.

A. Retailers That Use Certified Blendstocks To Make E16–E50 for Use in Flex-Fuel Vehicles Are “Oxygenate Blenders.”

EPA has previously recognized that E16–E50 blends are “substantially similar” *for use in flex-fuel vehicles*. As a result, retailers that sell E16–E50 for use in flex-fuel vehicles are selling an “allowable amount” of ethanol. And because they are selling an allowable amount of ethanol, they are “oxygenate” and “ethanol” blenders, not gasoline “fuel manufacturers” or “refiners.”

Selling E16–E50 blends for use in flex-fuel vehicles does not violate the sub-sim law under EPA’s prior interpretation of the sub-sim law. As Director Oge said in her 2006 letter, retailers may sell E16–E50 “through blender pumps” because “blends such as E20 and E30 for use in FFVs . . . are covered under the emissions certification for an E85 FFV.”⁸⁵ They are therefore “not prohibited under the Clean Air Act.”⁸⁶ In other words, E16–E50 blends sold for use in flex-fuel vehicles contain an “allowable amount” of ethanol under the sub-sim law.⁸⁷ This makes sense because flex-fuel vehicles are, by definition, certified to operate on E85, gasoline, and “any intermediate combination of gasoline and ethanol.”⁸⁸ It is also consistent with EPA’s misfueling rule, which “allow[s] the sale or introduction of gasoline containing greater than 10 volume percent ethanol into any flex-fuel vehicle.”⁸⁹

Under EPA’s rules, “[a] party . . . who adds an oxygenate compound to fuel in any otherwise allowable amount is not thereby considered a fuel manufacturer.”⁹⁰ Retailers that make E16–E50 blends by adding certified denatured fuel ethanol to certified gasoline fall under this exemption: they are adding “oxygenate compound” to gasoline in an “allowable amount” for use in flex-fuel vehicles.⁹¹ Similarly, retailers that use E85 made with certified gasoline blendstocks and denatured fuel ethanol are also adding “oxygenate compound” in an “allowable amount” for use in flex-fuel vehicles.⁹² Such retailers are gasoline “oxygenate blenders” and “ethanol blenders,” not refiners.⁹³

EPA should return to this interpretation of its regulations. This interpretation would be consistent with Director Oge’s 2006 letter and EPA’s misfueling rule, and it would avoid inflicting regulatory whiplash on fuel retailers who have invested in blender pumps in reliance

⁸⁵ 2006 Oge Letter, *supra* note 1.

⁸⁶ *Id.*

⁸⁷ 40 C.F.R. § 79.2(d)(2); Proposed E15 Rule, *supra* note 4, 84 Fed. Reg. at 10,594.

⁸⁸ 2006 Oge Letter, *supra* note 1.

⁸⁹ 40 C.F.R. § 80.1504(a)(3).

⁹⁰ *Id.* “Oxygenate compound means an oxygen-containing, ashless organic compound, such as an alcohol or ether, which may be used as a fuel or fuel additive.” 40 C.F.R. § 79.2(k).

⁹¹ *See id.* § 80.1610 (standards for denatured fuel ethanol for use in transportation fuel).

⁹² Proposed E15 Rule, *supra* note 4, 84 Fed. Reg. at 10,595 (allowing E85 “so long as that E85 had itself been produced solely from denatured fuel ethanol and certified gasoline (or CBOB)”).

⁹³ *See* 40 C.F.R. § 80.2 (u), (v), (jj), (ll), (mm).

on Dr. Oge’s clear statement of EPA policy and EPA’s misfueling rule. It would also remove regulatory barriers to higher ethanol blends without compromising fuel quality: fuel retailers would still be prohibited from using uncertified blendstocks to make E16–E50 for use in flex-fuel vehicles, and they would remain subject to the gasoline standards that apply downstream of refineries.

B. In the Alternative, E16–E50 Blends Are Not “Gasoline.”

If EPA rejects Petitioners proposal to treat E16–E50 blends as an “allowable amount” of ethanol for use in flex-fuel vehicles, then, Petitioners request that EPA reconsider its position that E16–E50 blends are “gasoline” under its fuel and fuel additive rules.

A fuel is “gasoline” subject to EPA’s gasoline registration and fuel quality control rules only if it is “commonly or commercially known or sold” as gasoline.⁹⁴ To assess whether a fuel is gasoline under this definition, courts use “objective standards.”⁹⁵ ASTM’s standards are “useful to the court as an aid in determining whether a particular product is ‘commonly or commercially known or sold as gasoline.’”⁹⁶

ASTM’s standards for gasoline make no provision for gasoline-ethanol blends containing more than 15% ethanol.⁹⁷ ASTM instead addresses E16–E50 blends through a separate “standard practice” for “midlevel ethanol blends”—ASTM D7794.⁹⁸ ASTM D7794 provides that these fuels “are sometimes referred to at retail as ‘Ethanol Flex Fuel’” and “are only suitable for use in ground flexible-fuel vehicles equipped with spark-ignition engines.”⁹⁹

This ASTM standard belies the assertion that E16–E50 blends are “commonly or commercially known or sold” as gasoline. It shows that they are instead commonly and commercially known and sold as alternative ethanol flex-fuel for use in flex-fuel vehicles.

Confirming this view, E16–E50 blends are labeled as alternative “ethanol flex fuel,” not as gasoline, under the Federal Trade Commission’s pump labeling rules.¹⁰⁰ These rules

⁹⁴ 40 C.F.R. §§ 79.32(a), 80.2(c).

⁹⁵ *United States v. Coastal Ref. & Mktg., Inc.*, 911 F.2d 1036, 1039 (5th Cir. 1990).

⁹⁶ *Id.*

⁹⁷ See ASTM D4814 -16e, Table 1, n.d.

⁹⁸ ASTM D7794–18a.

⁹⁹ *Id.*

¹⁰⁰ 16 C.F.R. § 306.0(o) (“Ethanol flex fuels means a mixture of gasoline and ethanol containing more than 10 percent but not greater than 83 percent ethanol by volume.”). E15’s labeling requirements are governed by EPA rules, not FTC rules, see FTC, *Complying with the FTC Fuel Rating Rule* (Oct. 2016) (“You do not need to post a label for ethanol flex fuels containing no more than 15% ethanol if you have labeled the dispenser in accordance with the EPA’s E15 labeling requirements at 40 CFR 80.1501.”).

require retailers to include a prominent label displaying the fuel's ethanol content and warning consumers: "Use *Only* In Flex-Fuel Vehicles. May Harm Other Engines":¹⁰¹

EPA has never explained how it could believe, contrary to these objective standards and rules, that E16–E50 blends are "commonly or commercially known or sold" as gasoline.¹⁰² In the past, EPA has simply pointed to its registration testing protocols, which define the gasoline "fuel family" to include fuels containing "more than 50 percent gasoline."¹⁰³ EPA's reliance on this definition is misplaced. EPA's rules provide that this fuel family definition applies only to "subpart F of this part"—the group testing protocols in part 79, subpart F.¹⁰⁴ The "fuel family" definition, therefore, does not in any way govern what fuels are "commonly or commercially known or sold" as gasoline for purposes of the general gasoline registration (subparts A, B, and D of part 79) or fuel quality (part 80) requirements. Nor are these "fuel family" definitions responsive to the relevant question under EPA's controlling regulations: whether E16–E50 blends are "commonly or commercially known or sold" as gasoline.

EPA should reconsider its assertion that E16–E50 blends are regulated as "gasoline." In the proposed REGS Rule, EPA would have "resolv[ed] the ambiguity of E16–50 blends" by excluding E16–E50 blends from its definition of gasoline and creating a new certified ethanol flex-fuel (E16–E83) that could only be sold for use in flex-fuel vehicles.¹⁰⁵ That approach would be preferable to prohibiting the sale of E16–E50 blends for use in flex-fuel vehicles.

II. EPA SHOULD ALLOW THE USE OF E15 IN MODEL YEAR 2000 AND EARLIER FLEX-FUEL VEHICLES.

EPA should take the opportunity to correct erroneous language in its new definition of "substantially similar," which mistakenly says that its interpretation applies only to "light-duty vehicles manufactured after model year 2001." EPA obviously meant after "model year 2000," since EPA's findings about E15 apply to "MY2001 and newer light-duty vehicles."¹⁰⁶

More importantly, EPA should also amend its new sub-sim definition to clarify that flex-fuel vehicles produced before model year 2001 may use E15. Under EPA's new definition of "substantially similar," E15 may be used only "in light-duty vehicles manufactured after model year 2001."¹⁰⁷ EPA's new rule also requires misfueling mitigation plans to ensure "that

¹⁰¹ 16 C.F.R. § 306.12(a)(4)(ii), (f).

¹⁰² Tier 3 Rule, *supra* note 66, 79 Fed. Reg. at 23,558.

¹⁰³ Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80,842; 40 C.F.R. §§ 79.50, 79.56(e)(1)(i).

¹⁰⁴ 40 C.F.R. § 79.50.

¹⁰⁵ Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80,843.

¹⁰⁶ *Id.* at 26,982; *cf.* 40 C.F.R. § 80.1504(a)(1).

¹⁰⁷ E15 Rule, *supra* note 4, 84 Fed. Reg. at 27,021. As explained above, the reference should be to model year 2000, not 2001.

the E15 is only introduced into commerce for use in model year 2001 and newer light-duty vehicles.”¹⁰⁸ Unlike the 2011 Misfueling Rule,¹⁰⁹ this definition of “substantially similar” contains no express exemption for flex-fuel vehicles produced before model year 2001.

Many model year 2000 or older flex-fuel vehicles remain on the road. According to EPA and other federal agencies, more than 600,000 ethanol flex-fuel vehicles were sold in model year 2000 alone, and a similar number were sold in model years 1998 and 1999 combined.¹¹⁰ By 2002, there were about “1.2 million” flex-fuel vehicles on the road.¹¹¹ There is no good reason to prevent the sale of E15 for use in these flex-fuel vehicles, which, by definition, can use any combination of gasoline and E85, including E15.

Reconsideration is proper. The proposed rule did not include these errors, so it would have been impracticable to raise these objections during the period for comment on the E15 Rule.¹¹² EPA should correct this oversight in its definition of “substantially similar” and include an exemption allowing the use of E15 in model year 2000 or older flex-fuel vehicles.

III. EPA SHOULD PROMULGATE REGULATIONS ALLOWING NATURAL GASOLINE BLENDSTOCKS FOR USE IN GASOLINE-ETHANOL BLENDS.

Retailers have commonly used E85 produced with uncertified natural gasoline (a mix of pentanes and some heavier hydrocarbons typically produced by natural gas processing facilities) to make E15 and E16–E50 blends using blender pumps. In the E15 Rule, EPA bans natural gasoline blendstocks for use in all gasoline-ethanol blends except E85.¹¹³ By EPA’s estimate, “approximately 50 percent of stations offering E15 make E15” with natural gasoline.¹¹⁴ All of those retailers must now cease using natural gasoline or cease selling E15 blends.

Instead of banning natural gasoline, EPA should “allow the use of natural gasoline as a blendstock to produce [gasoline-ethanol blends],” as it proposed in the REGS rule.¹¹⁵

Natural gasoline is a useful product. Natural gasoline could decrease the cost of producing E85, and the higher volatility of natural gasoline could allow the sale of E85 in the upper range of its allowable ethanol content (83% ethanol) by facilitating “compliance with

¹⁰⁸ *Id.*

¹⁰⁹ *See* 40 C.F.R. § 80.1504(a)(3).

¹¹⁰ Report to Congress: Effects of the Alternative Motor Fuels Act CAFE Incentives Policy 13 (2002). Manufacturers produced approximately 575,000 flex-fuel vehicles in model years 1999 and 1998. *Id.* at 21–23.

¹¹¹ *Id.* at 26.

¹¹² The Proposed Rule did not contain any definition of “substantially similar.”

¹¹³ E15 Response to Comments, *supra* note 4, at 53 (arguing that the use of natural gasoline is “illegal” but contending that this interpretation “is not novel or new”).

¹¹⁴ E15 Rule, *supra* note 4, 84 Fed. Reg. at 27,010.

¹¹⁵ Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80,844.

ASTM minimum volatility specifications.”¹¹⁶ This could, in turn, reduce the cost of producing E15, E16–E50, and E85 blends.

To be sure, the use of natural gasoline also poses environmental risks. Natural gasoline can be high in sulfur content; it can contain atypical elements (*i.e.*, chemical elements other than “CHONS”—carbon, hydrogen, oxygen, nitrogen and sulfur) that can poison vehicle catalysts; and the high volatility of natural gasoline can also cause excess evaporative emissions even when mixed with substantial amounts of ethanol.¹¹⁷ Although ASTM has published consensus-based standards governing natural gasoline used to make E85,¹¹⁸ EPA believes these voluntary standards alone “are not adequate to ensure the emissions control performance of” flex-fuel vehicles.¹¹⁹

Natural gasoline’s environmental risks can be managed by setting fuel standards for E85 blends used in blender pumps, similar to those that already apply to gasoline. EPA should promulgate a rule finalizing fuel standards for E85 blends used in blender pumps as they have for gasoline. Retailers that use these certified E85 parent fuels to make E15 and E16–E50 for use in flex-fuel vehicles would then be adding certified oxygenate, and they should therefore qualify as oxygenate blenders exempt from the gasoline manufacturer and refiner requirements.

CONCLUSION

EPA should reconsider or amend its rules as requested by Petitioners.

¹¹⁶ *Id.* at 80,844 (“Natural gasoline is an inexpensive and increasingly plentiful by product of the ongoing expansion in domestic natural gas and crude oil and its use would decrease EFF production costs Due to the relative high volatility of natural gasoline [typically ranging from 12 to 15 psi] and the low volatility of ethanol, the use of natural gasoline could also facilitate the manufacture of E85 in the upper range of its allowable ethanol content (*i.e.* 70 to 83 volume percent ethanol) while maintaining compliance with ASTM minimum volatility specifications.”).

¹¹⁷ *Id.*

¹¹⁸ In 2016, ASTM finalized standards governing natural gasoline for use in ethanol fuel blends. *See* ASTM D8011-16.

¹¹⁹ Proposed REGS Rule, *supra* note 14, 81 Fed. Reg. at 80,844.

Exhibit A



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 28 2006

OFFICE OF
AIR AND RADIATION

Ms. Dawna Leitzke
Executive Director
South Dakota Petroleum and Propane Marketers Association/
South Dakota Association of Convenience Stores
P.O. Box 1058
Pierre, South Dakota 57501

Dear Ms. Leitzke:

Thank you for your October 31, 2006, letter concerning the legality of selling ethanol-gasoline blends to motorists at retail outlets.

As you note in your letter, it is legal to sell gasoline containing up to 10 percent ethanol (E10) for use in any gasoline-fueled vehicle in the United States. Gasoline containing more than 10 percent ethanol may only be sold for use in flexible-fueled vehicles (FFVs) that are certified to meet emission standards on E85 (85 percent ethanol and 15 percent gasoline), gasoline without ethanol (E0), and any intermediate combination of gasoline and ethanol. Most vehicles are certified to emission standards for gasoline only, and thus are limited to no more than E10.

You asked for our position on marketers selling ethanol blends other than E10 and E85 through blender pumps for use in FFVs. You also asked if there are any prohibitions under the Clean Air Act or other federal laws that would prohibit a fuel marketer from selling E20 or E30 to consumers for use in FFVs.

With respect to the sale of blends such as E20 and E30 for use in FFVs, such blends are covered under the emissions certification for an E85 FFV, and thus are not prohibited under the Clean Air Act. I am not aware of any federal law that prohibits sale of such blends for use in FFVs.

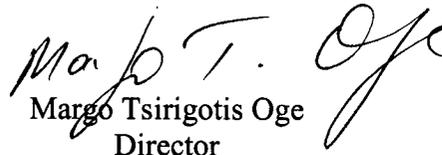
However, the use of such blends in gasoline-only vehicles is prohibited under the Clean Air Act. Use of gasoline containing ethanol amounts greater than E10 in a gasoline-only vehicle could cause emissions from the vehicle to increase. Section 203(a)(3)(A) of the Clean Air Act (the Act), 42 U.S.C. § 7522(a)(3)(A) prohibits any person from rendering inoperative emission control devices or elements of design. In addition, Section 203(a) prohibits any person from causing a violation of Section 203(a)(3)(A). Mis-fueling a motor vehicle in this manner may

violate this provision of the Act. The retailer who has variable ethanol percentage pumps may be liable for causing such violation, whether the mis-fueling occurs at self-serve or full-serve pumps.

Our understanding is that current industry practice is to dispense E85 from pumps that are separate from normal gasoline pumps and clearly marked as being appropriate for use only by ethanol FFVs. Variable ethanol percentage pumps that are installed in this manner, stand-alone and clearly marked as being available only for ethanol FFVs, may reduce the risk of such a violation.

Again, thank you for your letter. If you have further questions, please contact me or Jim Caldwell of my staff, at (202) 343-9303.

Sincerely,

A handwritten signature in black ink, appearing to read "Margo T. Oge". The signature is written in a cursive style with a large, sweeping flourish at the end.

Margo Tsirigotis Oge
Director

Office of Transportation and Air Quality

Exhibit B



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY
2565 PLYMOUTH ROAD
ANN ARBOR, MI 48105-2498

OFFICE OF
AIR AND RADIATION

Memorandum

Date: June 17, 2013

From: Jeff Herzog, Assessment and Standards Divisions,
Office of Transportation and Air Quality

To: Docket # EPA-HQ-OAR-2011-0135

Subject: Meeting with Representatives of ASTM International on June 13, 2013,
Regarding In-Use Quality Standards for E51-83

On June 13, 2013, staff from the Office of Transportation and Air Quality (OTAQ) met with representatives of ASTM International to discuss in-use fuel quality standards for E51-83 (i.e. ethanol blends that contain 51 to 83 volume percent ethanol for use in flexible fuel vehicles). EPA provided presentation materials on the subject from a June 4, 2013, meeting with the California Air Resources Board to help frame the discussion (attached).

The following people participated in person at OTAQ's facility in Ann Arbor Michigan:

ASTM: Colman Jones, General Motors
Charles Corr, Archer Daniels Midland

EPA: Chris Brunner, Jeff Herzog, Paul Machiele, Tia Sutton

The following people participated by phone:

EPA: Paul Argyropoulos

Attachments: EPA presentation materials

E51-83 and E16-50

EPA briefing for the California Air Resources Board, June 4, 2013

The E51-83 Problem

- No specific regulations for in-use E51-83 quality
- CAA 211(f) requires in-use fuels to be subsim to vehicle cert fuel
 - FFV cert fuel historically made from denatured ethanol and the gasoline used for certification testing with butane trimming. Thus, blendstocks used in E51-83 must be subsim to gasoline
 - Regulatory requirements for FFV cert test fuel are proposed in Tier 3
- 2006 guidance that RFG/RBOB must be used to make E51-83 in RFG areas
- These have been the only two levers to constrain the blendstocks used to make E51-83
 - Prevent dumping of stuff like cheap waste solvents into E51-83
- We have stated that there are no provisions to allow the use of natural gasoline in E51-83
 - Nevertheless, some ethanol blenders are ignoring the guidance, leading to market uncertainty
- Some refiners, terminals, blenders have been asking EPA to clarify standards for E51-83

The E51-83 Problem (continued)

- The fuel & fuel additive (F&FA) registration and health effects testing requirements under part 79 have so far only been applied to gasoline and highway diesel fuel
- E51-83 is not considered gasoline, & therefore has not yet been subject to the F&FA registration and health effects testing under part 79
 - Could designate as a transportation fuel in the future and require health effects testing
- No deposit control regs for E51-83 other than for the gasoline portion
 - Low additive concentration may be exacerbating, rather than helping deposits
- In addition to providing insufficient assurance of E51-83 quality, the current situation is creating barriers to the expansion in E51-83
- E85 volatility has been too low for good vehicle startability/performance
 - Likely leading to increased emissions and constraining manufacturer options in the context of LEVIII/Tier 3
 - Allowing use of high-volatility natural gasoline and butane could help to meet the minimum ASTM volatility requirements while maximizing ethanol content
 - Use of cheap natural gasoline and butane could make E51-83 more economical, thereby furthering the goals of the RFS program

Potential for Natural Gasoline and Butane Blending to Lower High-Ethanol Blend Prices

- Push for E30 to optimize use of octane benefits from ethanol
- Opportunity to increase ethanol use and reduce fuel costs through use of low-octane / inexpensive natural gasoline as a blendstock
- Domestic natural gasoline supply expected to increase substantially with growth in natural gas and tight-oil production
 - U.S. NGL production projected to increase ~45% from 2012 to 2017 (3,250 Mb/d by 2017)
- Blending of natural gasoline and butane would help to meet minimum ASTM volatility specs while maximizing ethanol content of E51-83
 - RVP of natural gasoline and butane substantially higher than RBOB/CBOB
- Price of natural gasoline & butane significantly less than RBOB/CBOB
 - NG prices may fall as additional volumes are produced that do not have a clear home
- Much of the natural gasoline will be produced in the midwest coincident with ethanol production
- We conducted a preliminary analysis of how natural gasoline and butane blending might help to reduce E51-83 & E30 prices
 - Considered octane and distribution costs, but not potential additional natural gasoline & butane distribution infrastructure costs

Preliminary Analysis of Potential Impacts on the Price of E51-83 & E30 from Natural Gasoline and Butane Blending

Blendstock Properties

Blendstock	RVP	RON	MON	(R+M)/2	Million BTU / BBL	BTU Blendstock / BTU of CBOB
NGL	12	73	72	72.5	4.69	93%
EtOH	2.4	130	101.6	115.8	3.53	70%
CBOB	9	96	86	83.8	5.02	100%
RBOB	6	96	86	83.8	5.02	100%
nButane	51.6	92.5	88	90.25	4.00	80%

Preliminary Analysis of Potential Impacts on the Price of E51-83 & E30 from Natural Gasoline and Butane Blending (cont.)

Blendstock Wholesale Price

Blendstock	Wholesale \$ / gallon	Blendstock price per gallon / CBOB price per gallon	Blendstock price per BTU / CBOB price per BTU
NGL	2.13	73%	79%
ETOH	2.52	83%	119%
CBOB	2.90	100%	100%
RBOB	2.98	103%	103%
nButane	1.46	50%	63%

- Does not include additional NGL & butane distribution infrastructure capital costs
- Ethanol price is for Chicago
- NGL and butane prices are for Mt. Belview
- CBOB and RBOB prices are for Gulf Coast
- All prices are for early March 2013

Preliminary Analysis of Potential Impacts on the Price of E51-83 & E30 from Natural Gasoline and Butane Blending (cont.)

Ethanol Blend Wholesale Price

Blend	NGL %	Butane %	RVP	Octane	\$ / gal	BTU cost compared to E10
E10	-	-	9	87	\$2.92	100%
E30	24.5%	-	9	90.6	\$2.63	98%
E51	49%	-	11.2	94.6	\$2.33	95%
E51	27%*	-	9		\$2.50	
E70	30%	-	9	102.8	\$2.40	103%
E80	18.8%	1.2%	9	107.4	\$2.43	108%
E85	12.3%	2.7%	9	109.8	\$2.44	111%

* CBOB is remainder of HC blendstock

E51-83 Discussion in the Tier 3 Rule

- Requested comment on new regulatory provisions to ensure E51-83 quality while allowing use of natural gasoline, and butane/pentane as blendstocks
- Requested comment on removing requirement that gasoline portion contain a deposit control additive
 - Would defer setting deposit control requirement for E51-83 until sufficient data is available
- We are evaluating when it would be appropriate to designate E51-83 as a transportation fuel and require health effects testing under the F&FA program
- Discussed need to ensure that all fossil fuel blendstocks used to make E51-83 incur an obligation under RFS
 - Anticipate follow-up action as part of RFS annual rules

Two Options to Ensure E51-83 Quality

- Under Option 1, E51-83 producer would assume all responsibilities of a refiner
 - Provides the most flexibility re blendstocks used
 - However, the per-batch testing and other requirements would be impractical for most E51-83 blenders
- Under Option 2, “E51-83 blender” would have minimal testing burden if they used only certified blendstocks
 - Certified gasoline & BOBs (RFG/RBOB in RFG areas)
 - Denatured ethanol that meets requirements proposed in T3 rule
 - Butane that meets existing requirements for downstream blending into gasoline
 - Pentane that meets requirements similar to those for butane
 - Natural gasoline that has been certified by producer for use in E51-83

Envisioned E51-83 Standards

- Under Option 1, the E51-83 refiner would be subject to
 - 10 ppm sulfur average, 50 or 80 sulfur cap (depending on what refinery-gate cap is finalized in T3)
 - 0.20 benzene cap
 - C, H, N, O, S
 - Maximum RVP requirements for gasoline
 - Minimum RVP requirements per ASTM
- Compliance demonstrated on per-batch basis via testing

Envisioned E51-83 Standards (continued)

- Under Option 2, the E51-83 “blender” would comply by simply blending compliant blendstocks (ethanol, denaturant, gasoline, natural gasoline, etc.)
- Would be subject to
 - 65 or 95 downstream sulfur cap (depending on what is finalized in T3)
 - Anticipate that actual sulfur levels would typically be much lower and average at or below 10ppm
- Compliance with sulfur cap and other chemical composition requirements could be demonstrated by retaining PTDs for certified blendstocks used and other quality control requirements that apply to downstream parties
- Demonstration of compliance with envisioned RVP requirements an issue
 - Evaluating the use of an RVP model in place of per-batch testing

Blendstock Requirements for E51-83 Blenders - Denatured Fuel Ethanol

- Current sulfur cap for DFE is 30 ppm
- Tier 3 rule proposed
 - 10 ppm sulfur cap
 - Limiting denaturants to gasoline, BOBs, and natural gasoline
 - Limiting denaturant concentration to max of 2.0 vol % (effectively 2.5% with rounding)
 - Believe that proposed denaturant requirements would obviate the need for benzene, olefins, and aromatics specifications (result in levels similar those under CARB's requirements)
 - Requested comment on whether it is appropriate to adopt specifications on denaturants similar to CARB's (10 ppm max S, 0.06 v% Bz, 0.5 v% olefins, 1.7 v% aromatics)

Blendstock Requirements for E51-83

Blenders – Butane & Pentane

- Current sulfur cap for butane blended downstream of refiner is 30 ppm
- Tier 3 rule proposed a 10 ppm sulfur cap
- Proposed to maintain the other existing requirements
 - Commercial grade butane: 95% pure, ≤ 1.0 vol % olefins, ≤ 2.0 vol % aromatics, ≤ 0.03 vol % benzene
 - Non-commercial grade butane: ≤ 10.0 vol % olefins, ≤ 2.0 vol% aromatics, ≤ 0.03 vol % benzene
 - If non-commercial grade butane is used, a quality assurance program is required that includes periodic sampling and testing of butane from each manufacturer
- Tier 3 rule proposed to establish similar requirements for downstream pentane blending

Blendstock Requirements for E51-83 Blenders – Natural Gasoline

- Producer of natural gasoline for use as an E51-83 blendstock would be required to register and conduct per-batch testing similar to requirements for gasoline refiner
- Producer would demonstrate compliance with 10 ppm sulfur cap, 0.20 vol % benzene cap, CHNOS
- Requested comment on need for other specifications (e.g., olefins, aromatics) and need to limit production sources (e.g., no drip gas)
- Producer would list RVP on PTD to facilitate blender compliance with RVP requirements through modeling

Path Forward to Address Outstanding Issues re Natural Gasoline

- Attempting to get DOE/NREL/ORNL to support study of (Details in Appendix #1):
 - Natural gasoline production, markets, distribution, prices
 - In-use natural gasoline quality
 - Impacts of natural gasoline on FFV emissions
 - Development of RVP blending model to allow terminal blending without need for RVP testing
- Seeking input from auto manufacturers, fuel producers, and other stakeholders

The E16-50 Problem

- EPA currently has no specific regulations for in-use E16-50 quality
- Under the F&FA registration program, the gasoline family includes fuels with at least 50% clear gasoline
 - Thus, E16-50 is logically subject to gasoline standards
- ~ 300 blender pumps and the number is growing
 - Currently, such blenders should be treated as refiners but they are unaware
 - Such blends are likely violating our standards on F&FA registration, RVP, detergents, other?
- Given DOE/USDA support for blender pumps, it makes dealing with them difficult
- EPA has been approached to approve a blender pump project

E16-50 Discussion in the Tier 3 Rule

- Treat E16-50 as gasoline (as today), or amend regulations similar to the approach for E51-83
- Treating as gasoline would likely make use of blender pumps unworkable
 - Per-batch gasoline quality requirements impractical
 - In non-RFG areas, 1 psi waiver for \leq E10 would mean that some E16-50 blends would exceed 9 psi
- Treating as an alternative fuel could accommodate the use of blender pumps
 - Would need to allow E16-50 blends to meet 10 psi
 - Would need to continue to require that FFVs be certified using 10 psi fuel, so evap. emissions effect should be neutral
 - All blendstocks used need to be certified upstream
 - Would defer the question of health effects testing under the F&FA program for the time being

Appendix #1

Potential Analytical Plan re the use of
Natural Gasoline as an E51-83 Blendstock

EPA briefing for the California Air Resources Board, June 4, 2013

Natural Gasoline Market Characterization

- Characterize how domestic natural gasoline production volumes are projected to increase in the future.
- What are the potential uses for the increased volume of natural gasoline? (refinery, heavy crude oil diluent, petrochemical, export, other)
- Where will natural gasoline be produced and what options are available to transport it to various markets?
 - What additional transportation infrastructure will be needed?
- How might the ramp up in natural gasoline volume affect its price?
- To what extent would the use of natural gasoline as a blendstock in the manufacture of high-level ethanol blends be a good market choice?
- Given other competing end-uses for natural gasoline, how much natural gasoline potentially might be available for use in high-level ethanol blends?
- What additional fuel distribution infrastructure would be needed to facilitate the use of natural gasoline in high-level ethanol blends?
- How might the use of natural gasoline in high-level ethanol blends tend to reduce the BTU-adjusted price of high-level ethanol blends compared to E10?
- What are the issues associated with segregating an existing pool of natural gasoline that would be suitable for use in high-level ethanol blends or performing additional processing to produce such a segregated pool that would meet necessary specifications for the downstream blending of high-level ethanol blends?
 - How might the sulfur and benzene standards we establish for such a segregated natural gasoline pool impact feasibility and cost? (e.g., 10 ppm sulfur cap, 0.6 benzene cap)
- Would volatility limits for high-level ethanol blends of 9 psi need to limit the volatility of a segregated natural gasoline pool to allow for downstream blending?

Natural Gasoline Quality Evaluation

- Characterize the chemical composition and physical properties of natural gasoline that might influence vehicle emissions and performance, and how these fuel parameters vary depending on the source of natural gasoline
- Sample natural gasoline from the range of possible domestic sources
- Measure sulfur, benzene, aromatics (speciated?), chlorine, salts, metals, distillation, oxidation stability, wastes and other contamination, other?
 - How does quality vary depending on source?
(well- crude vs. natural gas, fractionator, processor, refinery, drip gas).
 - How does quality vary by season?

Vehicle Emission and Performance Test Program

- Based on consideration of the results from the natural gasoline quality evaluation, conduct exhaust emission testing on a range of ethanol blends varying ethanol, natural gasoline, and conventional gasoline composition. It is presumed that emissions sensitivity will also provide an assessment of driveability impacts.
- Based on results of fuel survey, evaluate extent that certain fuel parameters in the natural gasoline test fuel blendstock need to be modified to reflect fuel standards that we might expect to finalize
 - E.g., sulfur and benzene content in the test fuel blendstock should be limited to ensure that the concentration in the blended test fuel is no greater than might be seen in gasoline meeting the proposed Tier 3 specifications)
- Report test fuel characteristics: sulfur, benzene, distillation, aromatics, RON, MON, speciation, blend fraction
 - Test at 75F and 20F
 - Test for: NO_x, NMOG, PM mass, CO₂, methane, toxics, and full emissions speciation on a subset
 - 10 FFV test vehicles of high volume to reflect range in in-use FFV vehicles
 - Ethanol blends of E10, E30, E51, E70, E83 made with two types of natural gasoline (trimmed with butane as necessary to the desired RVP) for 75F testing and one type of natural gasoline for 20F testing to compare to similar blends made with CBOB (not adjusted with butane)
 - Target 9 RVP natural gasoline blends for 75F testing, 12 RVP natural gasoline blends for 20F testing (CBOB blends at whatever RVP results – just measure and report)
 - Compare test results from ethanol blend fuel containing natural gasoline to results obtained using ethanol blend fuels formulated using CBOB
 - Evaluate whether testing other than for exhaust emissions is needed
 - Evaporative emissions?
 - Additional testing needed to address performance impacts? DI, V/L
 - Are there unique concerns that need to be addressed with respect to potential phase separation of ethanol blends made with natural gasoline?
 - Fuel injector deposit control test using bench rig

RVP Modeling and Validation

- Develop model to allow E51-83 blenders to demonstrate compliance with RVP requirements for finished fuel in place of per-batch RVP testing
 - Assumes RVP of blend components is available to blender (natural gasoline, CBOB, RBOB, RFG, CG, butane, pentane, denatured fuel ethanol)
- Validate results from model by RVP testing
- How many different samples of natural gasoline would need to be used in testing?