No. 12-___

IN THE

Supreme Court of the United States

ALLIANCE OF AUTOMOBILE MANUFACTURERS, ASSOCIATION OF GLOBAL AUTOMAKERS, INC., NATIONAL MARINE MANUFACTURERS ASSOCIATION, AND OUTDOOR POWER EQUIPMENT INSTITUTE,
Petitioners,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY, *ET AL.*,
Respondents.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

PETITION FOR A WRIT OF CERTIORARI

KATHLEEN M. SULLIVAN
Counsel of Record
SANFORD I. WEISBURST
DAVID B. SCHWARTZ
QUINN EMANUEL URQUHART & SULLIVAN, LLP
51 Madison Avenue, 22nd Floor
New York, NY 10010
(212) 849-7000
kathleensullivan@quinnemanuel.com

Counsel for Petitioners

March 25, 2013

WILSON-EPES PRINTING CO., INC. – (202) 789-0096 – WASHINGTON, D. C. 20002

QUESTIONS PRESENTED

The Clean Air Act prohibits the introduction into commerce 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" used in the emissions certification of those vehicles. 42 U.S.C. § 7545(f)(1)(B). The United States Environmental Protection Agency ("EPA") may waive this prohibition if the "fuel or fuel additive *** will not cause or contribute to a failure of any emission control device or system *** to achieve compliance by the *** engine with the emission standards with respect to which [the engine] has been certified ***." 42 U.S.C. § 7545(f)(4). EPA granted a waiver for "E15" (15% ethanol/85% gasoline), but only as to model-year 2001 and later engines. Engine manufacturers, food producers, and petroleum suppliers challenged this "partial waiver," but a divided panel of the court of appeals dismissed the case on the ground that all three groups lack standing. The questions presented are:

1. Whether the engine manufacturers have standing under Article III because they demonstrated that E15 will cause them injury in fact.

2. Whether prudential standing is non-jurisdictional and therefore can be waived by a government agency's (here, EPA's) failure to raise it.

3. Whether, in assessing a regulated entity's Article III standing to challenge regulatory action, an apparent "option" to comply with a statutory scheme should be viewed as coercive if use of the "option" is practically required.

PARTIES TO THE PROCEEDING

The following were parties to the consolidated proceedings before the U.S. Court of Appeals for the District of Columbia Circuit:

1. Alliance of Automobile Manufacturers, Association of Global Automakers, Inc., National Marine Manufacturers Association, and Outdoor Power Equipment Institute, petitioners in this Court, were petitioners below.

2. Additional petitioners in the consolidated proceedings below that are not joined in petitioners' Petition in this Court, and hence are respondents with respect to this Petition, see this Court's Rule 12.6, are Grocery Manufacturers Association, American Frozen Food Institute, American Meat Institute, National Chicken Council, National Council of Chain Restaurants of the National Retail Federation, North American Meat Association, National Pork Producers Council, National Turkey Federation, Snack Food Association, American Petroleum Institute, American Fuel and Petrochemical Manufacturers, International Liquid Terminals Association, and Western States Petroleum Association. The first ten of the foregoing petitioners below filed a petition for a writ of certiorari on February 21, 2013, which was docketed as *Grocery Manufacturers Ass'n* v. *EPA*, No. 12-1055.

3. EPA was the respondent below, and Growth Energy intervened in support of EPA below. Both are respondents with respect to this Petition.

CORPORATE DISCLOSURE STATEMENT

Pursuant to Supreme Court Rule 29.6, Petitioners represent as follows:

The Alliance of Automobile Manufacturers ("Alliance") is a trade association of 12 car and light truck manufacturers, including BMW Group, Chrysler Group LLC, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda North America, Mercedes-Benz USA, Mitsubishi Motors, Porsche Cars North America, Toyota Motors North America, Inc., Volkswagen Group of America, and Volvo Cars North America. The Alliance has no parent company, and no publicly held company has a 10% or greater ownership interest in the Alliance.

The Association of Global Automakers, Inc. ("Global Automakers") is a trade association that represents 13 international motor vehicle manufacturers and distributors, certain original equipment suppliers, and other automotive-related trade associations. Global Automakers' automobile manufacturer members include American Honda Motor Co., American Suzuki Motor Corp., Aston Martin Lagonda of North America, Inc., Ferrari North America, Inc., Hyundai Motor America, Isuzu Motors America, LLC, Kia Motors America, Inc., Maserati North America, Inc., McLaren Automotive, Ltd., Nissan North America, Inc., Peugeot Motors of America, Subaru of America Inc., and Toyota Motor North America, Inc. Global Automakers has no parent company, and no publicly held company has a 10% or greater ownership interest in Global Automakers.

National Marine Manufacturers Association ("NMMA") is the nation's largest recreational marine

industry association, representing nearly 1,300 boat builders, engine manufacturers, and accessory manufacturers. NMMA has no parent company, and no publicly held company has a 10% or greater ownership in NMMA.

Outdoor Power Equipment Institute ("OPEI") is an international trade association representing the utility, forestry, landscape, and lawn and garden equipment manufacturing industry. OPEI has no parent company, and no publicly held company has a 10% or greater ownership interest in OPEI.

TABLE OF CONTENTS

TABLE OF CONTENTS—Continued

TABLE OF CONTENTS—Continued

TABLE OF CONTENTS—Continued

TABLE OF AUTHORITIES

TABLE OF AUTHORITIES—Continued

TABLE OF AUTHORITIES—Continued

TABLE OF AUTHORITIES—Continued

TABLE OF AUTHORITIES—Continued

IN THE

Supreme Court of the United States

No. 12-__

ALLIANCE OF AUTOMOBILE MANUFACTURERS, ASSOCIATION OF GLOBAL AUTOMAKERS, INC., NATIONAL MARINE MANUFACTURERS ASSOCIATION, AND OUTDOOR POWER EQUIPMENT INSTITUTE,
Petitioners,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY, *ET AL.*,
Respondents.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the District of Columbia Circuit

PETITION FOR A WRIT OF CERTIORARI

Petitioners Alliance of Automobile Manufacturers, Association of Global Automakers, Inc., National Marine Manufacturers Association, and Outdoor Power Equipment Institute respectfully petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the D.C. Circuit in this case.

OPINIONS BELOW

The court of appeals' opinion (Pet. App. 1a-45a) is reported at 693 F.3d 169 (D.C. Cir. 2012). The court's order denying panel rehearing *en banc* (Pet. App. 187a) is reported at 704 F.3d 1005 (D.C. Cir. 2013).

EPA's first "partial waiver" decision is published at 75 Fed. Reg. 68,094 (Nov. 4, 2010), and pertinent excerpts are reprinted at Pet. App. 46-155a. EPA's second "partial waiver" decision is published at 76 Fed. Reg. 4,662 (Jan. 26, 2011), and pertinent excerpts are reprinted at Pet. App. 156-84a.

JURISDICTION

The court of appeals entered its judgment on August 17, 2012, and denied Petitioners' petition for rehearing or rehearing *en banc* on January 15, 2013. Pet. App. 1a, 185a, 187a. This Court's jurisdiction rests on 28 U.S.C. § 1254(1).

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

1. Article III, Section 2, Clause 1 of the United States Constitution provides in relevant part:

> The judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and Treaties made, or which shall be made, under their Authority ***.

2. The "right of review" section of the Administrative Procedure Act (APA), 5 U.S.C. § 702, states in relevant part:

> A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant state, is entitled to judicial review thereof.

3. Relevant portions of Section 211 of the Clean Air Act, 42 U.S.C. § 7545, are reprinted at Pet. App. 195a.

STATEMENT

The EPA decisions at issue allow the introduction into United States commerce of a fuel, E15, that contains 50% more ethanol than the currently authorized E10 fuel. Because vehicle engines for which EPA has now approved E15—engines in model year ("MY") 2001 and later automobiles and light-duty trucks—were not designed to run on E15, harm to engines will result (as EPA itself recognized), increasing costs to engine manufacturers. EPA's approval of E15 will affect other industries as well, increasing the demand and hence the price for corn (the raw ingredient from which ethanol derives), and thus affecting food producers that purchase corn; and requiring petroleum suppliers, distributers, and refiners to incur substantial costs to modify production and transportation methods to accommodate E15.

Engine manufacturers, food producers, and petroleum suppliers challenged EPA's decisions, arguing, *inter alia*, that the relevant Clean Air Act provision does not contemplate a "partial waiver" allowing a new fuel only in MY2001 and later vehicles, but rather contemplates only a full waiver allowing the new fuel to be used in all engines (including, *e.g.*, engines for use in boats and lawnmowers). Judge Kavanaugh, dissenting below, expressed that "[t]he merits are not close [because,] [i]n granting the E15 partial waiver, EPA ran roughshod over the relevant statutory limits." Pet. App. 42a. The panel majority, however, declined to reach the merits, ruling that none of the three industry groups has standing to bring the challenge.

This Court should summarily reverse based on the engine manufacturers' clear standing, or grant plenary review of the questions regarding the standing

of all three industry groups. The panel majority's holding that the engine manufacturers lack Article III standing failed to recognize that engine manufacturers are the intended beneficiaries of the statutory scheme, as that scheme is explicitly concerned with preventing harmful effects to engine emissions systems produced and warranted by the engine manufacturers. The majority likewise erred by disregarding virtually all of the evidence of engine harm in the record.

The issues regarding the other two industry groups also merit this Court's review. A majority of the panel below (Chief Judge Sentelle and Judge Tatel) ruled that the food producers lack prudential standing; but Judge Tatel (concurring) and Judge Kavanaugh (in dissent) noted a well-developed 5-3 circuit split on whether prudential standing is jurisdictional and therefore may be raised by an intervening party or by the court *sua sponte* where, as here, the government agency declines to raise the issue. This circuit conflict has important jurisprudential and practical consequences and should be resolved by this Court. As to the petroleum suppliers, the panel majority's ruling that they lack Article III standing raises the important question whether, in assessing a regulated entity's Article III standing to challenge regulatory action, the regulatory action should not be evaluated in isolation, but rather in the context of the broader statutory scheme and the practical realities of complying with that scheme.

1. The Renewable Fuel Standard ("RFS") requires qualifying refiners and importers of gasoline or diesel fuel to introduce into U.S. commerce a specified, annually increasing amount of renewable fuel. 42 U.S.C. § 7545(o)(2)(A)(i). The most practical and cost-effective means of complying with the RFS is to

blend ethanol into the fuel supply. The national gasoline supply currently consists largely of "E10," a fuel blend containing 10% ethanol and 90% gasoline, which was the maximum amount of ethanol legally allowed in gasoline prior to the EPA waivers at issue here. Blending only 10% ethanol in gasoline, however, will not suffice to allow the petroleum industry to meet the ever-increasing RFS requirements going forward. Pet. App. 3a.

Although *new* fuels containing a higher volume of renewable elements are a possible means to compliance with the RFS, their introduction is prohibited by the Clean Air Act absent a waiver from EPA. Specifically, the Act prohibits the introduction into commerce 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" used in the federal emissions certification of those vehicles. 42 U.S.C. § 7545(f)(1)(B). The Act then allows the EPA Administrator

> to waive the prohibitio[n] established under paragraph (1) *** of this subsection *** if he determines that the applicant has established that such fuel or fuel additive or a specified concentration thereof, and the emission products of such fuel or fuel additive or specified concentration thereof, will not cause or contribute to the failure of an emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is used) to achieve compliance by the vehicle or engine with the emissions standards with respect to which it has been certified ***.

Id. § 7545(f)(4).

2. In 2009, Growth Energy, a trade association that represents the ethanol industry, applied for a waiver from EPA allowing the introduction of E15. EPA provided for notice and comment on the application, and then issued two separate waiver decisions. In the first, EPA (a) approved the introduction of E15 for use in light-duty motor vehicles from MY2007 and later; (b) deferred decision on whether to approve E15 for use in MY2001-2006 light-duty motor vehicles pending completion of studies by the Department of Energy ("DOE"); (c) denied the waiver for MY2000 and older vehicles because of a lack of data on whether using E15 in such vehicles would contribute to failures of emissions controls; and (d) denied the waiver for nonroad engines and other vehicles and equipment for the same reason. Pet. App. 46a. After receiving the results of those studies, EPA issued its second decision, which extended the first decision's waiver to allow use of E15 in MY2001-2006 light-duty motor vehicles and engines. Pet. App. 156a.

The upshot of these decisions was a "partial" waiver allowing introduction of E15 for use in MY2001 and newer light-duty motor vehicles and engines, but not in MY2000 and older light-duty motor vehicles and engines. (EPA-sanctioned use of E15 thus affects only the automobile manufacturers, represented in this case by Petitioners the Alliance of Automobile Manufacturers and the Association of Global Automakers, Inc.) Because both MY2001 and newer and MY2000 and older vehicles (as well as nonroad engines of any vintage) are likely to be fueled at the same gas stations, which will (under the new rules) offer both E10 and E15, EPA required E15 manufacturers to submit a plan for implementation of "misfueling mitigation conditions," to prevent con-

sumers from using E15 in MY2000 and older vehicles and engines and in nonroad engines of any vintage. Pet. App. 48-49a. (Such misfueling affects both the automobile manufacturers and the nonroad engine manufacturers, represented in this case by Petitioners National Marine Manufacturers Association and Outdoor Power Equipment Institute.)[1] EPA also promulgated separate regulations requiring E15 manufacturers to take other steps to reduce the chance of misfueling. See 40 C.F.R. §§ 80.1500 to .1508. Proceedings challenging these regulations are still ongoing but would be moot if EPA's waiver decisions are invalidated.

3. The engine manufacturers, food producers, and petroleum suppliers petitioned the court of appeals for review of EPA's E15 waiver decisions. EPA was the respondent below, and Growth Energy intervened in support of EPA. EPA did not raise or argue that any of the three groups lacked Article III or prudential standing. Growth Energy did so argue.

A divided panel of the court of appeals dismissed the petitions for lack of Article III and/or prudential standing. Chief Judge Sentelle's lead opinion ruled that none of the groups has Article III standing. Pet. App. 6-19a. Chief Judge Sentelle began his analysis with the engine manufacturers, and reasoned that their showing of engine harm from E15 was too "hypothetical" (Pet. App. 10a) to establish standing. Chief Judge Sentelle characterized the automobile manufacturers' showing of harm to MY2001 and

[1] This Petition will use "engine manufacturers" when referring to all four Petitioners collectively, and "automobile manufacturers" or "nonroad engine manufacturers" where a distinction is appropriate.

newer vehicle engines as based on "a single reference to internal testing by Mercedes-Benz documenting a 2 percent hit to fuel economy and 'potential vehicle damage' from the use of E15 in Mercedes vehicles." Pet. App. 10a. Chief Judge Sentelle treated the engine manufacturers' evidence as relating almost entirely to the problem of consumers "misfueling" by putting E15 into engines for which it has not been approved by EPA (MY2000 and older vehicle engines, and nonroad engines of any vintage). Pet. App. 10-11a. As to this misfueling problem, Chief Judge Sentelle concluded that any injury to engine manufacturers is "speculative at best" because it "depends upon the acts of third parties not before the court." Pet. App. 11a. Chief Judge Sentelle went on to find that the petroleum suppliers lack Article III standing, Pet. App. 12-17a, and that the food producers lack prudential standing, Pet. App. 17-19a.

Judge Tatel concurred. Pet. App. 20a. Judge Tatel would have ruled that the food producers have Article III standing but lack prudential standing. *Ibid*. Judge Tatel noted that there is a circuit split on whether prudential standing is jurisdictional and hence may be raised by an intervenor or by the court *sua sponte* even though the defending party (here, EPA) has failed to raise it. *Ibid.* Although Judge Tatel was persuaded by the majority view that prudential standing is not jurisdictional, he deemed himself bound by D.C. Circuit precedent holding it jurisdictional. *Ibid*.

Judge Kavanaugh dissented. Pet. App. 21a. Judge Kavanaugh would have ruled that either the food producers or the petroleum suppliers have standing, and thus found it unnecessary to address the standing of the engine manufacturers. Pet. App. 22-23a &

n.1. As to the food producers, Judge Kavanaugh focused on whether prudential standing is jurisdictional. Pet. App. 27-32a. Judge Kavanaugh, like Judge Tatel, acknowledged the deep circuit split on whether prudential standing is jurisdictional. Pet. App. 20a, 29-31a. But unlike Judge Tatel, Judge Kavanaugh interpreted recent D.C. Circuit precedent as adopting the view that prudential standing is non-jurisdictional, and in any event viewed recent Supreme Court decisions (subsequent to the older D.C. Circuit precedent cited by Judge Tatel) as clarifying that a statutory limitation is jurisdictional only if it speaks to the power of the courts. Pet. App. 27-29a, 31a n.4. Even if prudential standing were jurisdictional and hence not waived by EPA's failure to raise it, Judge Kavanaugh would have found that the food producers have prudential standing because, *inter alia*, the RFS "expressly commands EPA to take account of the effect on 'food prices'—that is, the price of corn." Pet. App. 34a (quoting 42 U.S.C. § 7545(o)(2)(B)(ii)(VI)).

Turning to the petroleum suppliers (as to which the panel majority found Article III standing not satisfied on the theory that petroleum producers cannot complain about an E15 option that they are free not to use), Judge Kavanaugh would have found that the choice was hardly free because "[i]n the real world, *** the petroleum industry [does not] have a realistic choice not to use E15 and still meet the statutory renewable fuel mandate." Pet. App. 41a.

Judge Kavanaugh last addressed the merits, concluding that they "are not close *** [because,] [i]n granting the E15 partial waiver, EPA ran roughshod over the relevant statutory limits," Pet. App. 42a, which contemplate waiver for a fuel only as to all

engines, not merely as to some. Judge Kavanaugh described EPA's merits arguments as unpersuasive attempts "to get around the text of the statute." Pet. App. 43a. Judge Kavanaugh further explained that, "[i]f Congress wanted to authorize this kind of partial waiver, it could easily have said so (and going forward, could still easily do so)." Pet. App. 45a (citing provisions where Congress expressly provided authority for EPA to grant a waiver "in whole or in part").

4. With only seven judges participating in the vote, the court of appeals denied rehearing *en banc*.[2] Pet. App. 187-88a. Judge Kavanaugh dissented from the denial of rehearing *en banc*, reiterating the key points in his panel dissent regarding the food producers and the petroleum suppliers. Pet. App. 189-94a. Judge Kavanaugh added a brief discussion of the automobile manufacturers' Article III standing, "not[ing] that the E15 waiver apparently will harm some cars' engines ***. Indeed, just a few weeks ago, the American Automobile Association warned of the damage E15 will cause to car engines and took the extraordinary step of publicly asking EPA to block the sale of E15." Pet. App. 193a n.1 (citing Gary Strauss, *AAA Warns E15 Gasoline Could Cause Car Damage*, USA TODAY, Nov. 30, 2012).

5. On February 21, 2013, several of the petitioners in the court of appeals—the food producers and one of the petroleum suppliers (American Petroleum Institute)—filed a petition for a writ of certiorari, which has been docketed as *Grocery Manufacturers Ass'n* v. *EPA*, No. 12-1055. That petition presents

---

[2] The panel also denied rehearing, although Judge Kavanaugh would have granted the petition. Pet. App. 185-86a.

questions regarding the food producers' standing and the petroleum suppliers' standing, but not the engine manufacturers' standing. See Pet. For Writ of Certiorari at i, *Grocery Mfrs. Ass'n* v. *EPA*, No. 12-1055 (Feb. 21, 2013).[3] Responses to that petition are presently due on or before May 13, 2013. Petitioners respectfully suggest that the two petitions be considered by this Court in tandem.

REASONS FOR GRANTING THE WRIT

I. SUMMARY REVERSAL OR PLENARY REVIEW IS WARRANTED BECAUSE THE ENGINE MANUFACTURERS HAVE STANDING UNDER ARTICLE III

"Standing under Article III of the Constitution requires that an injury be concrete, particularized, and actual or imminent; fairly traceable to the challenged action; and redressable by a favorable ruling." *Monsanto Co.* v. *Geertson Seed Farms*, 130 S. Ct. 2743, 2752 (2010) (citing *Horne* v. *Flores*, 557 U.S. 433, 445 (2009)). The court of appeals erred in finding those basic requirements unsatisfied by the engine manufacturers here, and summary reversal or plenary review is warranted.

Because the majority of vehicles for which EPA has approved E15 were not designed to run on that fuel, E15's increased combustion temperatures and corrosive effects on engine parts will shorten the useful life of most vehicles, including MY2001 and newer vehicles. For example, EPA admitted that up to 20%

[3] If any of the three industry groups has standing, the court of appeals can reach the merits on remand. See, *e.g.*, *Rumsfeld* v. *Forum for Academic and Institutional Rights, Inc.*, 547 U.S. 47, 52 n.2 (2006).

of MY2006 vehicles and 40% of MY2005 vehicles would not contain systems that can withstand E15. Pet. App. 167a. See also U.S. GOV'T ACCOUNTABILITY OFFICE, BIOFUELS: CHALLENGES TO THE TRANSPORTATION, SALE, AND USE OF INTERMEDIATE ETHANOL BLENDS 12 (2011) ("BIOFUELS") (introduction of fuels with more than 10 percent ethanol will affect the almost 256 million automobiles, trucks, and other highway vehicles on America's roads).

In ruling that the engine manufacturers lack Article III standing (Pet. App. 9-12a), the court of appeals failed to recognize that engine manufacturers are the direct objects of the statutory scheme and regulatory action at issue, and proceeded to disregard virtually all of the substantial evidence of harm from E15. Taking that evidence into account and applying well-settled principles of Article III standing jurisdiction, however, it is clear that the engine manufacturers have Article III standing.

To begin with, the automobile manufacturers submitted evidence of direct injury. Far from relying on a "single reference to internal testing by Mercedes-Benz documenting a 2 percent hit to fuel economy and 'potential vehicle damage' from the use of E15 in Mercedes vehicles" (Pet. App. 10a), the automobile manufacturers submitted (1) three studies showing that increased ethanol levels will lead to rapid deterioration of vehicles' emission control systems (Pet. App. 74a, 235-38a); (2) evidence that cars using E15 emit higher rates of nitrous oxide ("NO_x") in violation of EPA's own regulations (Pet. App. 98a, 104-05a, 173a 233-34a); and (3) evidence that E15 will cause substantial damage to fuel pumps (Pet. App. 111-14a, 229-30a). As Judge Kavanaugh noted in his dissent from denial of rehearing *en banc*, the

American Automobile Association too has "warned of the damage E15 will cause to car engines and took the extraordinary step of publicly asking EPA to block the sale of E15." Pet. App. 191a n.1.

Moreover, the automobile manufacturers submitted uncontroverted evidence of additional consequences: Automobile manufacturers will be required to incur substantial costs in determining which vehicles are most susceptible to E15's corrosive effects, and consumers will in turn bring warranty and safety-related claims against these automobile manufacturers.

This evidence, discussed in further detail below, is more than sufficient to establish the engine manufacturers' injury in fact, as well as the other elements of Article III and prudential standing, warranting summary reversal. This Court is authorized to grant "a summary disposition on the merits" at the certiorari stage. S. Ct. R. 16.1. Such a disposition is appropriate where "the lower court result is so clearly erroneous, particularly if there is controlling Supreme Court precedent to the contrary, that full briefing and argument would be a waste of time." EUGENE GRESSMAN *ET AL.*, SUPREME COURT PRACTICE 344 (9th ed. 2007). See also *id.* at 274 (noting that this Court has granted summary reversal in cases "involving the jurisdiction of federal *** courts"). The court of appeals' decision fits squarely within that category, as the decision is contrary to basic principles of standing and ignores virtually all of the evidence submitted by the engine manufacturers.

If this Court finds summary reversal inappropriate, however, the Court should nonetheless grant plenary review on this issue as well as the issues concerning the standing of the food producers and

petroleum suppliers. There can be little doubt that EPA's waiver decisions—which allow nationwide introduction of a new fuel—will have immense practical consequences for engine manufacturers, food producers, petroleum suppliers, and consumers, and deserves the review on the merits that the court of appeals prevented through its erroneous standing decision.

A. The Court Of Appeals Failed To Recognize That Engine Manufacturers Are The Objects Of The Statutory Scheme

The court of appeals, in finding that the engine manufacturers lacked particularized and concrete injury, failed to recognize that the engine manufacturers are objects of the relevant statutory regime and thus fall within a category of entities as to which "there is ordinarily little question" that Article III standing requirements are satisfied. *Lujan* v. *Defenders of Wildlife*, 504 U.S. 555, 561-62 (1992). Specifically, the Clean Air Act allows EPA's Administrator to waive the prohibition against introducing new fuels only

> if he determines *** that such fuel *** and the emission products of such fuel *** will not cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is used) to achieve compliance by the vehicle or engine with the emission standards with respect to which it has been certified pursuant to [42 U.S.C. §§ 7525 and 7547(a)].

42 U.S.C. § 7545(f)(4).

Moreover, pursuant to regulations issued under the authority granted to the EPA Administrator by Sections 7525 and 7547, EPA requires engine manufacturers' products to meet strict exhaust emission standards. See, *e.g.*, 40 C.F.R. § 86.1181-01 (emission standards for MY2003 and earlier light-duty vehicles); *id.* § 86.1811-04 (emission standards for MY2004 and later light-duty vehicles); *id.* § 89.112 (emission standards for nonroad engines). EPA itself recognized that the introduction of E15 will make it significantly more difficult, and in certain cases impossible, for automobile manufacturers to ensure that existing and future engines will comply with these standards. See *infra*, at 16-17. Automobile manufacturers in fact present one of the strongest examples of regulated entities under *Lujan*, as they are beneficiaries of 42 U.S.C. § 7545(f). Because the statute prohibits any increase in the concentration of any fuel or fuel additive, *id.* § 7545(f)(1), unless EPA establishes that such change will not harm the emission control systems in a motor vehicle engine, *id.* § 7545(f)(4), EPA's erroneous conclusion that no harm will come to automobile manufacturers by definition causes them injury, and thus gives them standing.

B. The Court Of Appeals Ignored Nearly All The Evidence Of Injury In Fact To Engine Manufacturers

Even aside from the court of appeals' failure to acknowledge the *Lujan* presumption, the court plainly erred in disregarding virtually all of the engine manufacturers' evidence of injury in fact. Specifically, the court described the engine manufacturers as relying on "a single reference to internal testing by Mercedes-Benz documenting a 2 percent hit to fuel economy and 'potential vehicle damage'

from the use of E15 in Mercedes vehicles." Pet. App. 10a. In fact, the automobile manufacturers presented a detailed administrative record establishing that E15 will damage engines in the MY vehicles for which EPA approved E15, and in turn will harm these manufacturers themselves.

1. Evidence Of Engine Harm

As EPA recognized, the increased ethanol content of E15 will have adverse effects on MY2001 and newer vehicle engines in a variety of ways. Pet. App.77a. *First*, ethanol "enleans" the ratio of air to fuel in an engine, such that it "increases the proportion of oxygen relative to hydrocarbons." Pet. App. 77a. EPA admitted that enleanment "can lead to increased exhaust gas temperatures," with such extreme heat wearing away at "emission control hardware and performance over time," especially as to catalysts, "the most sensitive component" in relation to E15's effects. Pet. App. 77-78a. Catalysts are critically important to the reduction of emissions, and EPA agreed that "[c]atalysts that exceed temperature thresholds will deteriorate at rates higher than expected, compromising motor vehicles' ability to meet the required emission standards." Pet. App. 78a.

These effects are not hypothetical. During EPA's notice-and-comment period, the automobile manufacturers submitted three studies involving E15 or similar fuels, all of which "suggest that allowing the use of E15 in motor vehicles could cause a substantial number of motor vehicles to fail emissions standards because of increased catalyst deterioration over the motor vehicles' full useful life." Pet. App. 75a. One of these three studies "concluded that a large number of vehicles (12 of the 25 tested) failed *** to correct for increasing ethanol levels" such that they substan-

tially increased the risk of "thermal degradation." Pet. App. 73a. Other studies, including those on which EPA relied, also showed popular vehicle models failing emissions tests as a result of E15. Pet. App. 171-72a (2000 Honda Accord and 2002 Nissan Frontier); Pet. App. 85-86a (2006 Nissan Quest). EPA concluded that these studies, plus "comments from the automobile manufacturers," "all indicate that legitimate concerns exist that E15 could accelerate the deterioration of catalysts in a sizeable portion of the national fleet, leading to increased emissions." Pet. App. 83a.

Second, E15 harms such vehicle engines because it causes them to emit substantially more NO_x, in violation of EPA's emission standards. The automobile manufacturers presented several studies demonstrating "the expected linear relationship between ethanol content in gasoline-ethanol blends and increased NOx emissions." Pet. App. 89a. Once again, these results are inescapable: EPA recognized that, "[b]y virtue of testing of motor vehicles with gasoline-ethanol blends for more than three decades, it is known that gasoline-ethanol blends can have negative impacts on evaporative emissions." Pet. App. 104a. Specifically, "the NO_x emissions impact of E15 is likely to be in the range of 5% to 10%." Pet. App. 97a. EPA's own studies confirmed that this rise in NO_x emissions will "increase [vehicles'] total evaporative emissions beyond the standard to which they were certified." Pet. App. 176a.

Third, E15's corrosive effects cause what EPA describes as "materials compatibility issues." Pet. App. 77a. The automobile manufacturers submitted studies showing that fuels containing ethanol demonstrate "noteworthy indication[s] of heavily acceler-

ated corrosive effects" on metals used in engines. Pet. App. 111a. Likewise, the automobile manufacturers established, based on "over 30 years of research," that the specific concentration of E15 "provide[s] the most challenging environment for elastomers" used in motor vehicles. Pet. App. 113a. Such materials are used in fuel systems, as are certain plastics that ethanol will cause to disintegrate. Pet. App. 111a. See also Pet. App. 231a, 247-48a (discussion of this harm in petitioners' opening and reply briefs in the court of appeals).[4]

The court of appeals ignored all of this evidence and argument. Instead, the court characterized the automobile manufacturers as relying on a single study regarding Mercedes-Benz vehicles and held that this lone study was insufficient. Pet. App. 10a. As the above discussion shows, that description is erroneous.[5] Rather, the automobile manufacturers

---

[4] Since EPA's waiver decisions, additional studies have demonstrated E15's deleterious effects on MY2001 and newer vehicles. See, *e.g.*, COORDINATING RESEARCH COUNCIL, DURABILITY OF FUEL PUMPS AND FUEL LEVEL SENDERS IN NEAT AND AGGRESSIVE E15 at 3 (CRC Report No. 664 Jan. 2013) ("The fuel pumps and level senders that failed or exhibited other effects during testing on E15 *** are used on a substantial number of the 29 million 2001-2007 model year vehicles represented by the components evaluated in this report."); COORDINATING RESEARCH COUNCIL, INTERMEDIATE-LEVEL ETHANOL BLENDS ENGINE DURABILITY STUDY at 15 (CRC Project CM-136-09-1B Apr. 2012) ("[T]wo popular gasoline engines used in light-duty automotive applications of vehicles from model years 2001 through 2009 failed with mechanical damage when operated on intermediate-level ethanol blends (E15 and E20).").

[5] In any event, the Mercedes-Benz study likewise supports the automobile manufacturers' argument that E15 will cause substantial injury to their products, as it shows "[i]ncreased engine wear in the valve train and cylinder liner which results

presented numerous studies to EPA and to the court of appeals demonstrating that EPA's waiver will harm engines in the MY vehicles for which EPA approved E15.[6]

2. Evidence Of Consequential Harm To Engine Manufacturers

The court of appeals also plainly erred when it concluded that the automobile manufacturers could not establish standing because, in the court's view, the automobile manufacturers could establish only "a theoretical possibility of lawsuits" against the auto-

---

in severe engine damage" and "[f]uel supply pump damages due to increased materials abrasion." Mercedes-Benz, *Comments on Notice of Receipt of a Clean Air Act Waiver Application to Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Request for Comment* at 5-6 (July 20, 2009), *available at* http://www.e0pc.com/E15comments/MercedesBenz.pdf.

[6] To the extent that the court of appeals was influenced by the fact that the automobile manufacturers' arguments were "contrary to EPA's findings," Pet. App. 10a, the court's analysis is flawed. (EPA "believe[d] that any limited number of motor vehicles exceeding their evaporative emission standards when using E15 should not be considered significant for purposes of determining whether to grant a waiver under section 211(f)(4)." Pet. App. 176a.) A ruling that a court has no *jurisdiction* to hear a case because it agrees with one side on the *merits* is erroneous as a matter of law, because "[t]he question whether petitioners are entitled to the relief they seek goes to the merits, not to standing." *Monsanto*, 130 S. Ct. at 2753 n.1. See also *Decker* v. *Nw. Envtl. Def. Ctr.*, No. 11-338, --- S. Ct. ----, 2013 WL 1131708, at *9 (Mar. 20, 2013) ("The District Court, it is true, might rule that [petitioner's] arguments lack merit, or that the relief it seeks is not warranted on the facts of these cases. That possibility, however, does not make the cases moot. There may be jurisdiction and yet an absence of merits.") (citation and internal quotation marks omitted).

mobile manufacturers stemming from the above-discussed harm to vehicle engines. Pet. App. 11a.

To begin with, the court discussed the "theoretical possibility" of such harms to engine manufacturers as resulting only from consumers' "misfueling" of pre-MY2001 vehicles and nonroad engines with E15, reasoning that, "[i]f the contemplated injury is to occur, it will require that consumers use fuel in engines for which it is neither designed nor approved." Pet. App. 11a. Even if the engine manufacturers had relied exclusively on harms from misfueling, those harms would be sufficient to establish concrete injury, for EPA's own experience demonstrates that it is not speculative to predict that at least some consumers will misfuel: even "a price differential as small as a few cents per gallon [between fuels] [i]s enough to cause some consumers to misfuel." Pet. App. 228a. And misfueling alone poses substantial engine-harm and safety risks. See Pet. App. 123-24a (noting "significant safety hazard to operators of nonroad engines due to higher idle speeds and inadvertent clutch engagement"); *id.* at 109-10a ("E15 will increase corrosion of terne plate gas tanks" in older vehicles).

But in any event, the engine manufacturers did not introduce evidence of harms merely from customer misfueling of pre-MY2001 vehicles and nonroad engines, but rather introduced ample evidence of direct engine harm from *EPA-sanctioned fueling of MY2001 and later vehicles*. That evidence showed that such fueling, despite EPA's imprimatur, will reduce "operational performance and consumer satisfaction" (Pet. App. 231a) and cause the potential for litigation

against engine manufacturers.[7] EPA's decision to authorize the introduction of E15 as to MY2001 and newer vehicles will harm engine manufacturers in four ways.

First, EPA's waiver decisions will require automobile manufacturers to incur substantial costs in determining which models are at significantly higher risk of E15's corrosive effects. In *Monsanto*, this Court concluded that a group of respondents met the burden of showing standing for injunctive relief when respondents had "to conduct testing to find out whether and to what extent their crops have been contaminated." 130 S. Ct. at 2755.[8] Here, even EPA's own results showed that certain post-MY2000 models would not withstand E15. See Pet. App. 171-72a (table showing that certain Honda and Nissan models fueled with E15 failed emission test results). EPA recognized that up to 20% of all MY2006 vehicles and as many as 40% of all MY2005 vehicles would not contain the systems designed to handle

---

[7] While a small number of flexible-fuel vehicles have been "manufactured or modified to accept" E15 and even higher concentrations of ethanol, U.S. GAO, BIOFUELS, *supra*, at 6, engine harm will occur in the vast majority of MY2001 and newer vehicles that were not designed with E15 in mind.

[8] This Court recently reemphasized this point, noting that "we have found standing based on a 'substantial risk' that the harm will occur, which may prompt plaintiffs to reasonably incur costs to mitigate or avoid that harm." *Clapper* v. *Amnesty Int'l USA*, 133 S. Ct. 1138, 1150 n.5 (2013). Unlike in the instant case, where the record is replete with studies showing E15's likely harms to engines and costs to engine manufacturers to mitigate or avoid those harms, the respondents in *Clapper* "set forth no specific facts demonstrating that the communications of their foreign contacts will be targeted" in violation of any expectation of privacy. *Id.* at 1149.

E15's corrosive effects, see Pet. App. 167a, and explicitly acknowledged that the conflicting test results lead to "the conclusion [] that actual vehicle durability testing is warranted," Pet. App. 116a. Automobile manufacturers will therefore be required to incur substantial costs determining which of their vehicles are most susceptible to damage from E15.

Second, automobile manufacturers face substantial liability under their warranties. Such manufacturers are required by the Clean Air Act, in the event "a motor vehicle fails to conform to the applicable regulations [issued under section 42 U.S.C. § 7521, to remedy] such nonconformity *** at the cost of the manufacturer." 42 U.S.C. § 7541(h)(2). See also 40 C.F.R. § 85.2103(a) (implementing § 7541(h)(2)). The court of appeals rejected this argument because it did not think automobile manufacturers would face "a *meritorious* suit," Pet. App. 11a, but this Court has long found standing when a party faces costs from the *risk* of litigation, meritorious or otherwise, see *Already, LLC* v. *Nike, Inc.*, 133 S. Ct. 721, 727 (2013) (finding standing when a company "was allegedly pressing an invalid trademark to halt [a competitor's] legitimate business activity"); *MedImmune, Inc.* v. *Genentech, Inc.*, 549 U.S. 118, 129 (2007) (collecting cases demonstrating that "genuine threat" of litigation is sufficient to confer standing). The court of appeals also ignored the difficulties inherent in an automobile manufacturer establishing that an engine in a vehicle, driven for thousands of miles over many years, was harmed by the use of E15 in breach of warranty rather than some other factor. Whether or not the automobile manufacturers will prevail in such disputes, the costs of litigation that are sure to follow in light of the above warranty laws are

themselves injuries sufficient to confer standing on the automobile manufacturers.

Third, while the court of appeals gave passing mention to "safety-related claims," Pet. App. 10a, it failed to address the lawsuits stemming from the E15-induced breakdown of fuel-system components when exposed to the stresses of everyday use. As the automobile manufacturers explained to EPA, when "experienced under real-world driving conditions ***[,] E15 will damage fuel system components" made of plastics used "in fuel pump modules between model years 1993 and 2004." Pet. App. 111a. EPA also acknowledged what it described as "[d]riveability issues" that "could also occur from incompatibility between E15 and manufacturers' approaches at calibrating motor vehicles for fuels it is expected to encounter in-use." Pet. App. 120a. Personal-injury lawsuits—which are unaffected by warranty terms or limitations—against automobile manufacturers from those injured when fuel systems fail during use as a result of E15 again confer standing. See *MedImmune*, 549 U.S. at 129.

Fourth, EPA's decision to allow the introduction of E15 will place automobile manufacturers at substantial risk of engaging in a massive recall of millions of post-MY2001 vehicles. Regulations issued by the National Highway Traffic Safety Administration ("NHTSA") require a manufacturer to "furnish a report to the NHTSA for each defect in his vehicle *** that he *** determines to be related to motor vehicle safety." 49 C.F.R. § 573.6; see also, *e.g.*, 49 C.F.R. § 577.7 (setting out recall notification requirements "after the manufacturer first decides that *** a defect that relates to motor vehicle safety *** exists"). As discussed above, E15 will harm nearly all engines in

numerous ways that directly affect safety, from extremely hot exhaust emissions to corroding fuel pumps. E15's introduction thus forces engine manufacturers to sustain a variety of concrete and imminent costs from the introduction of E15, contrary to the court of appeals' conclusion.

C. The Engine Manufacturers Satisfy The Remaining Standing Requirements

Although the court of appeals focused only on the injury-in-fact element of Article III standing, the remaining elements are easily satisfied as well. Concerning causation, EPA's waiver decisions cause the engine manufacturers' injuries described above, because without a waiver it is unlawful for any fuel manufacturer to introduce E15 into commerce. 42 U.S.C. § 7545(f)(1). As to redressability, a ruling that EPA is not authorized to grant a partial waiver will redress these injuries by preventing consumers from fueling their engines with E15.

The engine manufacturers likewise have prudential standing to bring suit.[9] As this Court recently reaffirmed, "[t]he prudential standing test [a litigant] must meet 'is not meant to be especially demanding.'" *Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians* v. *Patchak*, 132 S. Ct. 2199, 2210 (2012) ("*Match-E*") (quoting *Clarke* v. *Securities Indus. Ass'n*, 479 U.S. 388, 399 (1987)). Rather, a party must only "be 'arguably within the zone of interests to be protected or regulated by the statute' that he

[9] As discussed in Point II, *infra*, and as Judge Kavanaugh concluded below (Pet App. 32a), prudential standing should not even be considered because it is a non-jurisdictional issue and EPA waived the issue by failing to raise it in the court of appeals.

says was violated." *Id.* (quoting *Ass'n of Data Processing Serv. Orgs., Inc.* v. *Camp*, 397 U.S. 150, 153 (1970)). Here, the zone of interests implicated by Section 7545 focuses on whether the introduction of new fuels, such as E15, will affect the performance of engines and emission control systems. That is evident from the plain language of § 7545(f)(4), which allows EPA to grant a waiver only where

> the applicant has established that such fuel *** and the emission products of such fuel *** will not cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle [or] motor vehicle engine *** in which such device or system is used.

Because the entire point of § 7545 is to regulate which fuels are used in engines and emission control systems, the engine manufacturers are protected by § 7545, and thus within its zone of interest.

In sum, the court of appeals' analysis of the engine manufacturers' standing is contrary to well-settled precedent of this Court and also disregards virtually all of the evidence in the record. Summary reversal is therefore appropriate; in the alternative, the Court should grant certiorari and set the issue for plenary review.[10]

---

[10] Although this Court's review (and summary reversal) is warranted because the court of appeals' decision is contrary to existing precedent on Article III standing, this Court should at minimum hold this petition pending this Court's decisions in *Grocery Manufacturers Ass'n* v. *EPA*, No. 12-1055, if granted, and *United States Forest Service* v. *Pacific Rivers Council*, No. 12-623, cert. granted, March 18, 2012, which presents an Article III standing question that might bear on the instant petition.

II. THIS COURT SHOULD RESOLVE THE WELL-DEVELOPED CIRCUIT SPLIT ON WHETHER PRUDENTIAL STANDING IS NON-JURISDICTIONAL AND HENCE CAN BE WAIVED

Two of the three members of the court of appeals panel below, and the Third Circuit in a recent decision, have acknowledged the deep circuit split on whether prudential standing is non-jurisdictional and therefore can be waived by a party's failure to raise it (as EPA failed to do here). See Pet. App. 20a (Tatel, J., concurring); Pet. App. 29-31a (Kavanaugh, J., dissenting); *Lewis* v. *Alexander*, 685 F.3d 325, 340 n.14 (3d Cir. 2012).

Specifically, the D.C., Second, and Sixth Circuits hold that prudential standing is jurisdictional and hence cannot be waived. See, *e.g.*, Pet. App. 20a (Tatel, J., concurring) (collecting D.C. Circuit cases); *Thompson* v. *Cnty. of Franklin*, 15 F.3d 245, 248 (2d Cir. 1994); *Cmty. First Bank* v. *Nat'l Credit Union Admin.*, 41 F.3d 1050, 1053 (6th Cir. 1994).

On the other hand, the Fifth, Seventh, Ninth, Tenth, and Federal Circuits hold that prudential standing is not jurisdictional and hence can be waived. See, *e.g.*, *Bd. of Miss. Levee Comm'rs* v. *EPA*, 674 F.3d 409, 417-18 (5th Cir. 2012); *RK Co.* v. *See*, 622 F.3d 846, 851-52 (7th Cir. 2010); *City of L.A.* v. *Cnty. of Kern*, 581 F.3d 841, 845 (9th Cir. 2009); *Wilderness Soc.* v. *Kane Cnty.*, 632 F.3d 1162, 1168 n.1 (10th Cir. 2011); *Gilda Indus., Inc.* v. *United States*, 446 F.3d 1271, 1280 (Fed. Cir. 2006).

This circuit split creates needless confusion and uncertainty in the lower courts that this court should dispel by granting review of the decision below. This

case provides an excellent vehicle for the Court to resolve the split because the issue is determinative of whether this case may proceed: although the EPA did not argue prudential standing (and hence waived it if the majority view is adopted), the court of appeals found that the food producers lacked prudential standing.[11]

Moreover, there are strong reasons to adopt the latter (majority) position. *First*, the majority view aligns with this Court's guidance on the subject, which, while not precisely addressing the issue whether prudential standing can be waived, does clearly distinguish prudential standing from jurisdictional inquiries. For example, *Steel Company* v. *Citizens for a Better Environment*, 523 U.S. 83 (1998), in holding that courts may not assume *arguendo* that jurisdiction is present in order to address the merits, noted that courts are free to make such an *arguendo* assumption as to "*statutory* [*i.e.*, prudential] standing." *Id.* at 97 (discussing *Nat'l R.R. Passenger Corp.* v. *Nat'l Ass'n of R.R. Passengers*, 414 U.S. 453, 465 n.13 (1974)).

Second, the majority approach sensibly defers to a government agency's expertise on which parties are within a statute's zone of interests, in cases like this

---

[11] As both Judge Tatel and Judge Kavanaugh found, the food producers have Article III standing. Specifically, "[a]s a result of the E15 waiver, there is likely—indeed, nearly certain in the current market—to be a significant increase in demand for corn to produce ethanol. *** Therefore, the E15 waiver will likely cause higher corn prices, and members of the food group that depend on corn will be injured." Pet. App. 25a (Kavanaugh, J., dissenting). See also *id.* at 25-26a (explaining that the food producers also have Article III standing under the doctrine of competitor standing).

one (and several others in the circuit split) that arise in the government agency context. If a government agency decides not to question a petitioner's prudential standing, there is no good reason to allow courts and intervening parties to second-guess that determination. Cf. *Am. Trucking Ass'ns, Inc.* v. *United States*, 627 F.2d 1313, 1320 n.25 (D.C. Cir. 1980) ("an agency decision that a party is 'aggrieved' for purposes of standing to intervene is 'entitled to great deference'") (quoting *Koniag, Inc., Village of Uyak* v. *Andrus*, 580 F.2d 601, 607 (D.C. Cir. 1978)); see generally *Chevron, U.S.A., Inc.* v. *Natural Res. Def. Council*, 467 U.S. 837, 844 (1984).

Here, EPA soundly chose not to question prudential standing as to the food producers. The standard is low: a party need only be "arguably within the zone of interests" of the relevant statute. *Match-E*, 132 S. Ct. at 2210 (citation and internal quotation marks omitted). The RFS directs EPA to take into account the effect on "food prices." 42 U.S.C. § 7545(o)(2)(B)(ii)(VI). And the RFS is closely intertwined with the waiver provision, *id.* § 7545(f)(1)(B). Not only are the provisions housed within the same section, but EPA cited the RFS extensively in its E15 waiver decisions, and the waiver applicant "specifically argued to EPA that the E15 waiver was 'necessary' for petroleum producers to meet the renewable fuel mandate." Pet. App. 193a. For these reasons, prudential standing cannot be doubted as to the food producers, and certiorari should be granted to resolve the deep circuit split on whether such a question is non-jurisdictional and thus waivable.

III. THIS COURT SHOULD CLARIFY THAT A PARTY HAS ARTICLE III STANDING TO CHALLENGE A BURDENSOME REGULATORY "OPTION" THAT IS IN REALITY MANDATORY

Finally, this Court should address the important question whether, in assessing a regulated entity's Article III standing to challenge regulatory action, the regulatory action should not be evaluated in isolation, but rather in the context of the broader statutory scheme and the practical realities of complying with that scheme. Here, the court of appeals held that the petroleum suppliers did not have Article III standing because, while they could show that they were injured by EPA's actions, they could not show causation. Pet. App. 13a. The court of appeals believed E15's introduction to be an "option," Pet. App. 14a, that petroleum suppliers could use at their preference. The court of appeals ignored, however, that EPA's decision to introduce E15 into the market will require petroleum suppliers to use the fuel, as it is now the only feasible option of complying with the RFS's escalating renewable fuel requirement. See 42 U.S.C. § 7545(o)(2)(B).[12] Nor is the majority's "traceability" argument correct: as Judge Kavanaugh explained in dissent, "as a result of the E15 waiver in conjunction with the renewable fuel mandate *** members of the petroleum group now may—and as a factual matter, *must*—use E15 *** in order to meet the renewable fuel mandate."

[12] Even if some other option existed for petroleum suppliers, it does not for automobile manufacturers, who will have no control over what fuel consumers put into their vehicles once such fuel is introduced into the market, as EPA recognized. Pet. App. 145a.

Pet. App. 38a. The majority therefore erred, as Judge Kavanaugh recognized, by "consider[ing] the E15 waiver in some kind of isolation chamber," Pet. App. 39a, as opposed to the reality created by E15's introduction into the market.

The court of appeals' decision thus is in tension with numerous decisions by this Court, all of which hold that a party's injuries from regulatory action must be assessed against the background of existing law. See, *e.g.*, *Massachusetts* v. *EPA*, 549 U.S. 497, 524 (2007) (concluding that EPA's decision not to act harmed states, and rejecting "the erroneous assumption that a small incremental step, because it is incremental, can never be attacked in a federal judicial forum"); *Clinton* v. *City of New York*, 524 U.S. 417, 431 (1998) (concluding that petitioner could demonstrate standing because, "[u]nder New York statutes that are already in place, it is clear that [petitioners] will be assessed by the State for substantial portions of any recoupment payments that the State may have to make to the Federal Government") (footnotes omitted).[13] Given the practical importance of the question, and the tension between the decision below and prior decisions of this Court, certiorari should be granted.

---

[13] While this Court recently concluded that, where parties could "only speculate as to whether any (asserted) interception would be under [the challenged statute] or some other authority, they cannot satisfy the 'fairly traceable' requirement," *Clapper*, 133 S. Ct. at 1149, here, by contrast, there is no speculation that the combined effects of § 7545 and the RFS will require petroleum suppliers to sell E15.

CONCLUSION

The Court should grant certiorari and issue an opinion summarily reversing the decision of the court of appeals. Alternatively, the case should be set for plenary consideration.

Respectfully submitted,

KATHLEEN M. SULLIVAN
Counsel of Record
SANFORD I. WEISBURST
DAVID B. SCHWARTZ
QUINN EMANUEL URQUHART
& SULLIVAN, LLP
51 Madison Avenue, 22nd Floor
New York, NY 10010
(212) 849-7000
kathleensullivan@
quinnemanuel.com

Counsel for Petitioners

March 25, 2013

APPENDIX

APPENDIX 1

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued April 17, 2012 Decided August 17, 2012

No. 10-1380

GROCERY MANUFACTURERS ASSOCIATION, ET AL.,
PETITIONERS

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

GROWTH ENERGY,
INTERVENOR

Consolidated with 10-1414, 11-1002, 11-1046, 11-1072, 11-1086

On Petitions for Review of Final Actions of the Environmental Protection Agency

---

Catherine E. Stetson argued the cause for petitioners Grocery Manufacturers Association, et al. *Michael F. McBride* argued the cause for petitioners Alliance of Automobile Manufacturers, et al. With them on the briefs were *Mary Helen Wimberly, Richard A. Penna, Marisa Hecht, Chet M. Thompson, William L. Wehrum, and Lewis F. Powell, III.*

Kenneth T. Cuccinelli, II, Attorney General, Office of the Attorney General for the State of Virginia, *E. Duncan Getchell Jr.*, Solicitor General, *Stephen R. McCullough*, Senior Appellate Counsel, *Charles E. James Jr.*, Chief Deputy Attorney General, and *Wesley G. Russell Jr.*, Deputy Attorney General, *Luther Strange*, Attorney General, Office of the Attorney General for the State of Alabama, *E. Scott Pruitt*, Attorney General, Office of the Attorney General for the State of Oklahoma, and *John J. Burns*, Attorney General, Office of the Attorney General for the State of Alaska, were on the brief as *amici curiae* State of Alabama, et al.

Jessica O'Donnell, Attorney, Department of Justice, argued the cause and filed the brief for respondent.

Randolph D. Moss argued the cause for intervenor. With him on the brief were *Kenneth R. Meade* and *Brian M. Boynton*.

Before: SENTELLE, Chief Judge, TATEL and KAVANAUGH, *Circuit Judges*.

Opinion for the Court filed by *Chief Judge* SENTELLE.

Concurring opinion filed by *Circuit Judge* TATEL.

Dissenting opinion filed by *Circuit Judge* KAVANAUGH.

SENTELLE, *Chief Judge*: Petitioners, trade associations whose members are part of the petroleum and food industries, filed petitions for review of two EPA decisions approving the introduction of E15 – a blend of gasoline and 15 percent ethanol – for use in select motor vehicles and engines. Because we hold that no petitioner has standing to bring this action, we dismiss all petitions for lack of jurisdiction.

I. The Waiver Proceeding

In the Energy Policy Act of 2005, Congress incorporated into the Clean Air Act (CAA) the Renewable Fuel Standard, Pub. L. 109-58, § 1501(a) (2005) (RFS). As amended, the RFS requires qualifying refiners and importers of gasoline or diesel fuel to introduce into U.S. commerce a specified, annually increasing volume of renewable fuel. 42 U.S.C. § 7545(*o*)(2)(A)(i).

In order to comply with the requirements of the RFS, refiners and importers primarily blend corn-based ethanol into the fuel supply. The national gasoline supply currently consists largely of "E10," a gasoline blended with 10 percent ethanol. Given the continual increase in required volume of renewable fuel, E10 alone will not meet the producers' obligations forever. E10 has substantially saturated the U.S. gasoline market already, yet the volume of renewable fuel required to be introduced increases annually, up to 36 billion gallons of renewable fuel in 2022. *Id.* § 7545(*o*)(2)(B)(i)(I). Moreover, an increasing percentage of the increasing RFS obligation must come from "advanced biofuels," *i.e.*, sources other than ethanol derived from corn. *Id.* § 7545(*o*)(2)(B)(i)(II) (requiring that advanced biofuel make up 21 billion of the 36 billion gallons of renewable fuel required in 2022). Fuel manufacturers must, therefore, introduce new types of renewable fuels in order to continue to meet their growing burden under the RFS.

Fuel manufacturers cannot introduce new renewable fuels into the market at will. The Clean Air Act prohibits manufacturers from introducing into commerce "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" used in the federal emissions certification of those vehicles. 42 U.S.C. § 7545(f)(1)(B). To bring most new fuels (including renewable fuels) to market, a manufacturer must apply for a waiver of this prohibition pursuant to CAA Section 211(f)(4), 42 U.S.C. § 7545(f)(4). The Administrator of EPA may grant such a waiver "if he determines that the applicant has established that such fuel or fuel additive or a specified concentration thereof, and [its] emission products . . ., will not cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is used) to achieve compliance by the vehicle or engine with the emission standards with respect to which [the vehicle or engine] has been certified pursuant to sections 7525 and 7547(a) of this title." 42 U.S.C. § 7545(f)(4).

In March 2009, Growth Energy, a trade association representing the ethanol industry, applied for a Section 211(f)(4) waiver to introduce E15, an unleaded gasoline blend containing 15 percent ethanol. After notice and comment, EPA issued two separate waiver decisions. In its first waiver decision, Partial Grant and Partial Denial of Clean Air Act Waiver Application Submitted by Growth Energy To Increase the Allowable Ethanol Content of Gasoline to 15 Percent, 75 Fed. Reg. 68,094 (Nov. 4, 2010), EPA approved the introduction of E15 for use in light-duty motor vehicles from model-year 2007 and later. At the same time, it denied the waiver for model-year 2000 and older vehicles because it could not determine given the data available that using E15 in

such vehicles would not contribute to failures of emissions controls. For the same reason, EPA denied the waiver for nonroad engines, vehicles, and equipment (*e.g.*, boats, all-terrain vehicles, and weedeaters), heavy-duty gasoline engines and vehicles, and motorcycles. Finally, EPA deferred its decision whether to approve E15 for use in model-year 2001–2006 light-duty motor vehicles and engines, stating that it needed further results from Department of Energy (DOE) tests that measured the effects of ethanol blends on the durability of engine catalysts (which "scrub" motor vehicle emissions by converting harmful exhaust gases into carbon dioxide, nitrogen, and water). After receiving those results, EPA issued a second decision. Partial Grant of Clean Air Act Waiver Application Submitted by Growth Energy To Increase the Allowable Ethanol Content of Gasoline to 15 Percent, 76 Fed. Reg. 4662 (Jan. 26, 2011). That second decision extended the waiver to permit the use of E15 in light-duty motor vehicles and engines from model-years 2001–2006.

In sum, EPA granted "partial" waivers approving the introduction of E15 for use in model-year 2001 and newer light-duty motor vehicles and engines. These waivers are conditional. E15 manufacturers are required to (1) introduce only E15 that meets certain fuel quality parameters and (2) submit for approval by EPA a plan for the implementation of "misfueling mitigation conditions" set forth in the EPA decision. The term "misfueling," as used in the EPA decisions, refers to the use of E15 in pre-2001 vehicles and other non-approved vehicles, engines, and equipment. The misfueling mitigation conditions and strategies which EPA set forth as necessary for such a plan included pump-labeling re-

quirements, participation in a pump-labeling and fuel-sample compliance survey, and proper documentation of ethanol content on transfer documents.

Three sets of industry groups (collectively, "Petitioners") representing members who either (1) manufacture engines and related products (the "engine-products group" or "engine manufacturers"), (2) sell food (including livestock) that requires corn as an input (the "food group" or "food producers"), or (3) produce or handle petroleum and renewable fuels (the "petroleum group" or "petroleum suppliers") petitioned this court for review of EPA's E15 waivers. We review herein the consolidated petitions. Growth Energy, the waiver applicant, intervened in support of EPA's defense of its waiver decisions.

II. Standing

Petitioners contend that (1) EPA lacks authority under CAA Section 211(f)(4) to grant "partial" waivers approving the use of E15; (2) Growth Energy, the waiver applicant, failed to meet a required evidentiary burden under Section 211(f)(4); (3) EPA failed to provide sufficient opportunity for comment on certain aspects of its waiver decision; and (4) the record does not support EPA's decision to grant the partial waivers. While the government does not contest petitioners' standing to petition for review of EPA's waiver decisions, intervenor Growth Energy has called our attention to the potential failure of petitioners to establish standing under Article III. Even in the absence of intervenor's objection, we would be required to review petitioners' standing. Standing under Article III is jurisdictional. If no petitioner has Article III standing, then this court has no jurisdiction to consider these petitions. *See, e.g.*, *Lujan v.*

Defenders of Wildlife, 504 U.S. 555, 560 (1992). Regardless of whether the parties raised the issue, we have "an independent obligation to be sure of our jurisdiction." *Sierra Club v. EPA*, 292 F.3d 895, 898 (D.C. Cir. 2002). Therefore, before we even consider the merits of the petitions, we must determine whether any petitioner has standing to bring them to court.

A.

As the Supreme Court has declared, "the law of Art. III standing is built on . . . the idea of separation of powers." *Allen v. Wright*, 468 U.S. 737, 752 (1984). The application of the standing doctrine, along with other jurisdictional requirements, ensures that federal courts act only within their constitutionally prescribed role: resolving "Cases" and "Controversies," U.S. CONST. art. III, § 2, cl. 1, "those disputes which are appropriately resolved through the judicial process," *Lujan*, 504 U.S. at 560. *See also Fla. Audubon Soc'y v. Bentsen*, 94 F.3d 658, 663 (D.C. Cir. 1996) (en banc). To establish Article III standing, a party must establish three constitutional minima: (1) that the party has suffered an "injury in fact," (2) that the injury is "fairly traceable" to the challenged action of the defendant, and (3) that it is "likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision." *Lujan*, 504 U.S. at 560-61 (internal quotation marks, alterations, and citations omitted).

The party seeking to invoke the jurisdiction of the federal court "bears the burden of establishing these elements." *Id.* at 561. To do so, it must "support each element of its claim to standing 'by affidavit or other evidence.'" *Sierra Club*, 292 F.3d at 899 (quoting

Lujan, 504 U.S. at 561). On direct review of agency action, it must provide that support in its opening brief. *Public Citizen, Inc. v. NHTSA*, 489 F.3d 1279, 1289 (D.C. Cir. 2007). If the petitioner's standing is self-evident (as when the petitioner is the object of an administrative action), "no evidence outside the administrative record is necessary." *Sierra Club*, 292 F.3d at 900. But when the administrative record fails to establish a substantial probability as to any element of standing, "the petitioner must supplement the record to the extent necessary to explain and substantiate its entitlement to judicial review." *Id.*

B.

As an initial matter, we note that each separate petitioner in this case is a trade association. Each petitions for review of EPA's waiver decisions on behalf of its members, *e.g.*, car manufacturers, petroleum refiners, and cereal distributors. This is not in itself a problem. An association has standing to sue on its members' behalf if it can show that (1) a member "would have standing to sue in [its] own right," (2) "the interests the association seeks to protect are germane to its purpose," and (3) "neither the claim asserted nor the relief requested requires that an individual member of the association participate in the lawsuit." *Id.* at 898. We have no reason to believe any petitioners fail to meet the latter two requirements. We therefore need consider only whether any petitioner association has demonstrated that any of its members would have standing to sue in its own right.

We need not conclude that all petitioners have standing. As all petitioners raise the same issues, if

we determine that even one of the petitioners has Article III standing, we will then have established our jurisdiction to consider the merits of the petitions. *See, e.g.*, *Military Toxics Project v. EPA*, 146 F.3d 948, 954 (D.C. Cir. 1998). Standing is not self-evident for any of the entities Petitioners represent. EPA's waiver decisions do not on their face directly impose regulatory restrictions, costs, or other burdens on any of these types of entities. This, of course, makes Petitioners' task more difficult. "The Supreme Court has stated that standing is 'substantially more difficult to establish' where, as here, the parties invoking federal jurisdiction are not 'the object of the government action or inaction' they challenge." *See Public Citizen*, 489 F.3d at 1289 (quoting *Lujan*, 504 U.S. at 562.). Petitioners have to demonstrate that EPA's actions – in particular, approving E15 via partial waivers – have caused any one of their members an injury in fact for which we can provide redress in this action. Each industry group advances a theory of standing, but none is in fact adequate to meet the burden of establishing standing under Article III.

1. The Engine-Products Group

The engine-products group advances a convoluted theory of standing. It begins with the assertion that its members manufacture cars, boats, and power equipment with engines not made for, certified, or warranted to use ethanol blends greater than E10. As a result of EPA's partial waivers, they assert, E15 will enter the fuel market and consumers will use it in their products. Such use, the engine manufacturers claim, "may" harm their engines and emission-control devices and systems. Pet'rs Br. at 17. This

will supposedly subject the engine manufacturers to liability: consumers may bring warranty and safety-related claims against the manufacturers under state or federal law, and the government may impose a recall of some engines or vehicles.

This hypothetical chain of events fails as a showing of Article III standing. An Article III injury in fact must be "(i) 'concrete and particularized' rather than abstract or generalized, and (ii) 'actual or imminent' rather than remote, speculative, conjectural or hypothetical." *In re Navy Chaplaincy*, 534 F.3d 756, 759–60 (D.C. Cir. 2008). It must also be "substantially probable" that the challenged agency action caused that injury. *See Fla. Audubon*, 94 F.3d at 663 (citing *Kurtz v. Baker*, 829 F.2d 1133, 1144 (D.C. Cir. 1987)). The engine-products group's theory of standing meets neither of these requirements.

To begin with, the engine manufacturers provide almost no support for their assertion that E15 "may" damage the engines they have sold, subjecting them to liability. They suggest that damage may occur via two avenues. First, they contend that consumers will use E15 in the model-year 2001 and newer light-duty vehicles and engines for which it has been approved, and that E15 may harm those engines (contrary to EPA's findings). They support this assertion, however, with a single reference to internal testing by Mercedes-Benz documenting a 2 percent hit to fuel economy and "potential vehicle damage" from the use of E15 in Mercedes vehicles. This is hardly evidence of a substantial probability that E15 will cause engine harm.

Second, the engine-products group maintains that consumers will "misfuel," *i.e.*, fuel non-approved ve-

hicles and equipment with E15, and that E15 will cause damage to and emissions failures in such engines, including boat engines and power equipment motors, for which engine manufacturers may incur liability. This convoluted theory of causation will not meet Petitioners' burden. It is well established that "[c]ausation, or 'traceability,' examines whether it is substantially probable that the challenged acts of the defendant, not of some absent third party, will cause the particularized injury of the plaintiff." *Fla. Audubon Soc'y v. Bentsen*, 94 F.3d at 663 (citing *Allen v. Wright*, 468 U.S. 737, 753 n.19 (1984)) (other citations omitted). As in *Florida Audubon*, *Allen v. Wright*, and numerous other cases cited in *Florida Audubon*, any injury to the engine-product petitioners – speculative at best – depends upon the acts of third parties not before the court. If the contemplated injury is to occur at all, it will require that consumers use the fuel in engines for which it is neither designed nor approved, suffer damages to those engines as a result, and bring successful warranty or other liability lawsuits against engine-products petitioners. These petitioners attempt to drag their claims across the causation threshold by simply listing federal laws that either impose liability for emission warranty claims, *see* 42 U.S.C. § 7541, or provide for recall of nonroad engines and vehicles that fail to meet emission standards, *id.* § 7547. This is not sufficient. That a theoretical possibility of lawsuits exists does not establish the required probability that the third parties will misfuel in the fashion posited by petitioners, then bring the lawsuits, then prevail. The last link is particularly problematic; the engine-products petitioners have failed to point to any grounds for a *meritorious* suit against them. As

they admit, Pet'rs' Br. at 18, their engines are not warranted for E15, nor is it clear why manufacturers would be liable for damages from consumer-induced misfueling. As for their recall theory, they have failed to establish any probability that the government would recall engines because third parties had misfueled. This leaves yet another weak link in their causative chain, especially given the limited circumstances in which manufacturers are generally subject to a recall, *see Chrysler Corp. v. EPA*, 631 F.2d 865, 896 (D.C. Cir. 1980).

To reiterate what we noted earlier in this discussion, "[T]he 'case or controversy' limitation of Article III still requires that a federal court act only to redress injury that fairly can be traced to the challenged action of the defendant, and not injury that results from the independent action of some third party not before the court." *Simon v. Eastern Ky. Welfare Rights Org.*, 426 U.S. 26, 41 (1976). The engine-products group has not established standing to bring these petitions.

2. The Petroleum Group

The petroleum group includes associations that represent refiners and importers, which produce petroleum products, as well as "downstream" entities like fuel blenders and terminals, which handle, store, or transfer those products. The petroleum group asserts that both groups suffer an injury in fact traceable to EPA's waiver decisions. It argues that EPA's partial approval of the introduction of E15 into commerce effectively forces refiners and importers to actually introduce E15 into commerce because they are obligated to meet the renewable fuel requirements of the RFS. They further assert that the downstream

entities will have to accommodate this new fuel type. Both sets of entities will incur substantial costs as a result of taking on E15, including "special fuel production, transportation, and fuel segregation efforts." Pet'rs' Br. at 19. Further costs will come from the "new compliance surveys and fuel pump dispenser labeling" required by the E15 waiver decisions. *Id.* In addition, these entities will purportedly face the liability risks that come with producing a fuel that they contend will cause damage to misfueled vehicles.

This theory fails to establish standing. We cannot fairly trace the petroleum group's asserted injuries in fact – the new costs and liabilities of introducing and dealing with E15 – to the administrative action under review in this case. That action, EPA's approval of the introduction of E15 for use in certain vehicles and engines, does not force, require, or even encourage fuel manufacturers or any related entity to introduce the new fuel; it simply permits them to do so by waiving the CAA's prohibition on introducing a new fuel that is not substantially similar to the fuel used to certify vehicles and engines under their applicable emission standards, *see* 42 U.S.C. § 7545(f)(4). In short, the only real effect of EPA's partial waivers is to provide fuel manufacturers the option to introduce a new fuel, E15. To the extent the petroleum group's members implement that option voluntarily, any injury they incur as a result is a "self-inflicted harm" not fairly traceable to the challenged government conduct. *See, e.g.*, *Pub. Citizen*, 489 F.3d at 1290 (citing *Nat'l Family Planning & Reproductive Health Ass'n, Inc. v. Gonzales*, 468 F.3d 826, 831 (D.C. Cir. 2006)); *Petro-Chem Processing, Inc. v. EPA*, 866 F.2d 433, 438 (D.C. Cir. 1989).

Petitioners maintain that the new fuel choice provided by the partial waivers is no real choice at all. They stress that if EPA makes E15 an option (as it did), "refiners and importers will necessarily have to introduce E15 into commerce" to meet their volume requirements under the RFS. Even if we were to consider the refiners' and importers' decision to introduce E15 as forced rather than voluntary, it would be "forced" (under their theory) not by the availability of E15 (which is the only effect of the partial waivers) but rather by the RFS, which obliges manufacturers to introduce certain volumes of renewable fuel. In other words, if the injuries of refiners and importers are traceable to anything other than their own choice to incur them, it is to the RFS, not to the partial waivers they challenge here.

In any event, Petitioners have not established that refiners and importers will indeed have to introduce E15 to meet their volume requirements under the RFS. The partial waivers provide obligated parties with a new option for meeting those requirements, but the RFS does not mandate that obligated parties use E15 or any other particular product to meet its requirements. In fact, as noted above, refiners and importers may only use a capped amount of corn-based ethanol to meet their RFS obligations, and they are already nearing that cap. They have provided no reason why they could not instead use a different type of fuel to meet those obligations. Of course, if that reason is cost – either the costs of research and development of fuels, or the costs of introduction of such a fuel – then their choice to instead use E15 would be a decision grounded in economics, not one forced on them by the RFS and most certainly not by the partial waivers. Moreover, Peti-

tioners themselves indicated that there are still other options besides using E15: "The RFS includes mechanisms by which the EPA Administrator may waive the total volume of renewable fuel for any given year or waive requirements for certain renewable fuels." Pet'rs' Br. at 5 (citing 42 U.S.C. § 7545(*o*)(7)(A)(i)-(ii), (D), (E), (F)). While EPA may decline to waive the RFS requirements, lobbying the Administrator to do so is another option at Petitioners' disposal. In sum, Petitioners have not demonstrated that the partial E15 waivers provide refiners and importers with a Hobson's choice (introduce E15 or violate the RFS) rather than a real one, such that the costs they would sustain by introducing E15 could be considered "forced by" or traceable to the challenged agency action.

Petitioners offer a related argument centered on the downstream parties. These parties own infrastructure (*e.g.*, deepwater, barge, and pipeline terminals) that aids in the transfer, handling, and blending of petroleum products. Pet'rs' Br. at x-xi, 19. Regardless of whether the E15 waiver can be said to "cause" petroleum refiners and importers to begin introducing E15, Petitioners suggest that they will introduce it given their RFS obligations, and downstream entities will have to expend significant resources to blend and otherwise deal with the E15 the refiners and importers choose to introduce. In this way, according to Petitioners, "EPA's partial E15 waiver therefore will require these organizations to expend enormous resources to blend and introduce E15 into the market." Pet'rs' Br. at 19.

With this argument, Petitioners again wrongly identify the actual cause of downstream entities'

choice to incur the costs of handling E15. Neither the RFS nor the partial E15 waivers "require" downstream entities to have anything to do with E15. If they face any pressure to handle E15, it is likely economic in nature. Downstream parties very well might lose business if they decline to blend or otherwise deal with E15, but that makes the choice to handle E15 one they make in their own self-interest, not one forced by any particular administrative action. In this way, Petitioners' argument is much like one we rejected in *Petro-Chem Processing v. EPA*, 866 F.2d at 438. In that case, the Hazardous Waste Treatment Council (HWTC) challenged EPA regulation of hazardous waste disposal in salt domes that HWTC argued was too lax. HWTC asserted that its members who provide cleanup services or waste brokering would be "forced" to use geologic repositories (salt domes) under the lax EPA standards and their use of unsafe methods would risk greater potential liability. The court rejected this theory of standing. We pointed out that this potential liability, "insofar as it is incurred voluntarily, is not an injury that fairly can be traced to the challenged action." *Id.* (internal quotation marks omitted). The members who used salt domes could avoid the potential liability by choosing safer methods than required by EPA. If they chose the unsafe methods because of "competitive pressures," they would presumably do so "in their own self-interest." *Id.* The resulting injury would thus be "self-inflicted, . . . so completely due to the [complainants'] own fault as to break the causal chain." *Id.* (internal quotation marks omitted). So too here.

All of this is to say that Petitioners' attempt to draw a causal link between the E15 waivers they

challenge and the costs they would incur by introducing E15 ultimately rings hollow. If anything is "forcing" these entities to incur the costs of introducing a new fuel, it is the obligations set by the RFS, competitive pressures, or some combination thereof. EPA's partial waivers simply provide a new choice of fuel that manufacturers may produce. There is not a cause of those costs providing the petroleum group with standing.

3. The Food Group

The food group's members produce, market, and distribute food products that require corn. This petitioner group suggests that EPA's partial approval of E15 will increase the demand for corn, which is currently used to produce most ethanol on the market. This increased demand will, according to the food group, increase the prices their members have to pay for corn.

We need not decide here whether the food group has established Article III standing with this theory because the theory plainly fails to demonstrate prudential standing.[1] While we must find Article III standing before addressing the merits of a case, *see supra* p. 6, "it is entirely proper to consider whether there is prudential standing while leaving the question of constitutional standing in doubt, as there is no mandated 'sequencing of jurisdictional issues.'" *Grand Council of Crees (of Quebec) v. FERC*, 198 F.3d 950, 954 (D.C. Cir. 2000) (quoting *Ruhrgas AG v. Marathon Oil Co.*, 526 U.S. 574, 575 (1999)).

---

[1] Chief Judge Sentelle would hold that the food group has neither Article III nor prudential standing.

To demonstrate prudential standing, the food group "must show that the interest it seeks to protect is arguably within the zone of interests to be protected or regulated by the statute . . . in question" or by any provision "integral[ly] relat[ed]" to it. *Nat'l Petrochem. Refiners Ass'n v. EPA*, 287 F.3d 1130, 1147 (D.C. Cir. 2002) (per curiam) (internal quotation marks omitted). The food petitioners have not made such a showing. They point out only that their interests are protected by EISA, the legislation that set forth the RFS, because EISA requires EPA to review, among other things, "the impact of the use of renewable fuels on . . . the price and supply of agricultural commodities . . . and food prices" when EPA sets renewable fuel volume requirements in the future. 42 U.S.C. § 7545(*o*)(2)(B)(ii)(VI). However, the statute Petitioners challenge here is the CAA's fuel-waiver provision, Section 211(f)(4) – not EISA. Nor is EISA "integral[ly] relat[ed] to Section 211(f)(4). Both statutes may have fuel as their subject matter, and the RFS may have even incentivized Growth Energy to apply for a waiver under Section 211(f)(4). But more is required to establish an "integral relationship" between the statute a petitioner claims is protecting its interests and the statute actually in question; otherwise, "the zone-of-interests test could be 'deprive[d] . . . of virtually all meaning." *Fed'n for Am. Immigration Reform, Inc. v. Reno*, 93 F.3d 897, 903 (D.C. Cir. 1996) (quoting *Air Courier Conference of Am. v. Am. Postal Workers Union*, 498 U.S. 517, 530 (1991)). Hypothetical prudential standing to challenge action under EISA does not give the food petitioners prudential standing to petition for review of action taken pursuant to CAA Section 211(f)(4).

The dissent relies on *Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians v. Patchak*, 132 S. Ct. 2199 (2012), but that decision neither changed the prudential-standing standard nor has any particular applicability to the facts here. The food group's interest in low corn prices is much further removed from a provision about cars and fuel than a neighboring land owner's interest is from a statute about land acquisition.

III. Conclusion

For the above reasons, we hold that no petitioner has standing to bring these claims. We therefore dismiss all petitions for lack of jurisdiction.

TATEL, *Circuit Judge*, concurring: I agree with the dissent that the food group has Article III standing. *See* Dissenting Op. at 4-6. I also agree with those circuits that have held that prudential standing is non-jurisdictional. *See id.* at 9-10 (collecting cases). This Circuit, however, has directly held to the contrary. *See, e.g.*, *Steffan v. Perry*, 41 F.3d 677, 697 (D.C. Cir. 1994) ("Prudential standing is of course, like Article III standing, a jurisdictional concept."); *Animal Legal Defense Fund, Inc. v. Espy*, 29 F.3d 720, 723 n.2 (D.C. Cir. 1994) ("Standing, whether constitutional or prudential, is a jurisdictional issue which cannot be waived or conceded."). True, passing statements by subsequent panels may be in some tension with these earlier decisions, *see* Dissenting Op. at 10 n.4 (collecting cases), and in recent years the Supreme Court has certainly criticized lower courts for overusing the "jurisdictional" label, *see id.* at 7-8 (collecting cases). But taken in context these cases are "too thin a reed," *id.* at 9, to permit this panel to depart from our clear prior holdings that prudential standing is jurisdictional – no matter how much we may think those decisions are wrong or that the Supreme Court may be preparing to hold otherwise. *See Rasul v. Myers*, 563 F.3d 527, 529 (D.C. Cir. 2009) ("A panel of this court . . . must adhere to the law of our circuit unless that law conflicts with a decision of the Supreme Court." (citing *LaShawn A. v. Barry*, 87 F.3d 1389 (D.C. Cir. 1996) (en banc))); *United States v. Williams*, 194 F.3d 100, 107 (D.C. Cir. 1999) (circuit precedent binding unless "eviscerat[ed]" by subsequent Supreme Court decisions), *abrogated on other grounds by Apprendi v. New Jersey*, 530 U.S. 466 (2000).

KAVANAUGH, *Circuit Judge*, dissenting: Federal law establishes a renewable fuel mandate that requires gasoline producers to introduce significant amounts of renewable fuel (such as ethanol) into the Nation's gasoline supply. To maintain statutory clean air standards, however, EPA is required to approve new fuels and fuel additives such as ethanol, and EPA may do so only when the new fuel would not cause any car models made after 1974 to violate federal emissions standards. EPA had previously approved use of E10, gasoline with up to 10% ethanol, for use in cars. But the requirement set by the statutory renewable fuel mandate could not be reached solely with E10. Ethanol manufacturers then petitioned EPA to exercise its statutory waiver authority to allow use of E15, gasoline with up to 15% ethanol. In order to issue the waiver under the statute, EPA had to find that E15 would not cause any car models made after 1974 to fail to meet emissions standards. EPA found that E15 could cause emissions failures in some cars made after 1974 (namely, in cars made between 1975 and 2000). Nonetheless, EPA still granted the waiver. For the first time ever, EPA granted what it termed a "partial waiver," meaning that the waiver allowed E15 use only in cars made after 2000.

In this suit, members of the food industry and the petroleum industry contend that EPA's E15 waiver is illegal. The food group is suing because, as a result of EPA's E15 waiver, ethanol production will increase and demand for corn (a necessary raw material for ethanol) will rise significantly. In turn, corn prices will rise. Therefore, food producers, which compete directly with ethanol producers in the upstream market for purchasing corn, will have to pay

more for corn. The petroleum group is suing because, as a result of EPA's E15 waiver and the statutory renewable fuel mandate, those in the petroleum industry now must refine, sell, transport, and store E15, incurring significant costs to do so.

Despite the fact that two enormous American industries will be palpably and negatively affected by EPA's allegedly illegal E15 waiver, the majority opinion tosses the case for lack of standing. Judge Tatel and I agree that the food group has Article III standing. But the majority opinion finds that the food group is not an aggrieved party (that is, does not have prudential standing) for purposes of the Administrative Procedure Act. And the majority opinion concludes that the petroleum group's injury is not caused by EPA's E15 waiver decision and that the petroleum group thus does not have Article III standing.

This suit may proceed if *either* the food group or the petroleum group has standing. In my view, both have standing.

The food group has Article III standing because the E15 waiver, particularly in conjunction with the statutory renewable fuel mandate, will increase the prices the food group must pay for corn. And the food group's prudential standing under the APA is not contested by EPA. That matters because prudential standing (unlike Article III standing) is not jurisdictional, meaning that prudential standing has been forfeited by EPA and is thus not properly before the Court. In any event, the food group easily clears the low bar for prudential standing under the APA.

The petroleum group has Article III standing because the E15 waiver, in conjunction with the statu-

tory renewable fuel mandate, will require some petroleum companies to refine, sell, transport, or store E15, imposing significant costs. And even if prudential standing were not forfeited, the petroleum group is a party regulated under the statutory waiver provision; therefore, the petroleum group's prudential standing under the APA is undisputed.[1]

On the merits, I conclude that the E15 waiver violates the statute. The waiver might be good policy; if so, Congress has the power to enact a new law permitting E15. But under the statute as currently written, EPA lacks authority for the waiver. I would therefore grant the petition for review and vacate EPA's E15 waiver decision. I respectfully dissent.

I

The Constitution limits the jurisdiction of federal courts to "Cases" and "Controversies." U.S. CONST. art. III, § 2, cl. 1. One aspect of the case or controversy requirement is standing. To sue in federal court, a plaintiff must demonstrate Article III standing, which consists of three requirements: (1) injury in fact – an invasion of a legally protected interest that is concrete and particularized, and actual or imminent; (2) causation – a fairly traceable connection between the injury and the challenged conduct; and (3) redressability – a likelihood that the injury will be redressed by a favorable decision. *See Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992). In the regulatory context, standing has not been limited to those directly regulated by an agency. Ra-

[1] Because I find that either of these two groups has standing, I do not address the standing of the engine products group.

ther, under settled standing case law, those who suffer injury as a result of an agency's allegedly illegal regulation of *someone else* can still have standing, although the analysis in such cases is tricky (and frankly rather unpredictable).[2] Article III standing is jurisdictional, meaning courts must consider the issue even if the defendant or respondent does not assert that the plaintiff or petitioner lacks Article III standing.

In addition, the Administrative Procedure Act's general cause of action for challenging agency action extends only to parties "aggrieved" by the agency action. *See* 5 U.S.C. § 702. The cause of action's limitation to "aggrieved" parties is referred to (somewhat loosely and imprecisely) as prudential standing. As explained more fully below, prudential standing is not jurisdictional, meaning that it can be forfeited and need not be considered by the court if the defendant or respondent does not assert it.

A

First, I will explain why the food group has standing. For its part, EPA has not contested the food group's Article III and prudential standing. A majority of the Court – Judge Tatel and I – conclude that the food group has Article III standing. A different majority – Chief Judge Sentelle and Judge Tatel – conclude, however, that the food group lacks prudential standing to challenge EPA's E15 waiver.

---

[2] When I refer to the food group and the petroleum group throughout this opinion, I am using shorthand to refer to the many such food and petroleum trade organizations and individual businesses that have sued here. *See also* Maj. Op. at 7-8 (whether trade organization has standing turns on whether any individual member has standing).

The food group includes producers of processed food made with corn and those who raise livestock fed with corn. It is hard to overestimate the significance of corn to the American food industry. And petitioners' submissions to EPA and this Court reveal the following about the effects of EPA's E15 waiver on the food industry: In E10, up to 10% of gasoline is made up of ethanol. In E15, up to 15% of gasoline is made up of ethanol. That's a *50% increase* in the amount of ethanol used. In hard numbers, with only E10 on the market, 14 billion gallons of ethanol could be produced each year for the Nation's gasoline supply. With E15 on the market, 21 billion gallons of ethanol can be produced each year. That's *an additional 7 billion gallons* of ethanol annually produced for use in the U.S. gasoline supply. As a result of the E15 waiver, there is likely – indeed, nearly certain in the current market – to be a significant increase in demand for corn to produce ethanol. The extra demand means that corn producers can charge a higher price. Therefore, the E15 waiver will likely cause higher corn prices, and members of the food group that depend on corn will be injured. *See generally, e.g.*, Advanced Economic Solutions, Implications for US Corn Availability Under a Higher Blending Rate for Ethanol (June 2009), J.A. 604.

This is Economics 101 and requires no elaborate chain of reasoning. It is no surprise that EPA – which is typically quite aggressive in asserting standing objections in lawsuits against it – has not contested the food group's standing in this case. The food group has standing under Article III.

Even apart from that analysis, the food group has Article III standing based on our competitor standing

cases. When an agency illegally regulates an entity's competitor in a way that harms the entity – for example, by loosening regulation of the competitor – we have said that the entity has Article III standing to challenge the allegedly illegal regulation. *See, e.g.*, *Sherley v. Sebelius*, 610 F.3d 69, 72 (D.C. Cir. 2010) ("The doctrine of competitor standing addresses the first requirement [of Article III standing] by recognizing that economic actors suffer an injury in fact when agencies lift regulatory restrictions on their competitors or otherwise allow increased competition against them.") (internal quotation marks and brackets omitted); *Honeywell International Inc. v. EPA*, 374 F.3d 1363, 1369 (D.C. Cir. 2004) ("it is well established that parties suffer cognizable injury under Article III when an agency lifts regulatory restrictions on their competitors or otherwise allows increased competition") (internal quotation marks and brackets omitted); *Louisiana Energy & Power Authority v. FERC*, 141 F.3d 364, 367 (D.C. Cir. 1998) ("We repeatedly have held that parties suffer constitutional injury in fact when agencies lift regulatory restrictions on their competitors or otherwise allow increased competition."). Here, EPA's E15 waiver loosens a prohibition on gasoline and ethanol producers and thereby harms entities such as the food group that directly compete with gasoline and ethanol producers in the upstream market for purchase of corn. *See Sherley*, 610 F.3d at 72-74 (similarly finding doctors have competitor standing after agency loosened restrictions and thereby allowed increased competition in upstream market for grants that fund research). Our competitor standing precedents thus independently support Article III standing for the food group.

A majority of the Court – Judge Tatel and I – agree that the food group has Article III standing. But Chief Judge Sentelle and Judge Tatel conclude that the food group lacks prudential standing.

Contrary to their majority opinion, I would conclude that prudential standing likewise poses no barrier for the food group. To begin with, EPA did not raise prudential standing as a defense to this lawsuit. That's critically important because prudential standing is not jurisdictional and thus can be forfeited when the defendant or respondent fails to assert it. Because EPA did not challenge the food group's prudential standing, any prudential standing objection is forfeited.

The majority opinion concludes that prudential standing is jurisdictional. *See* Maj. Op. at 15-17 (rejecting food group's claims solely on prudential standing grounds); Maj. Op. at 2, 17 (dismissing all claims, including those of food group, for lack of jurisdiction).

In my view, Supreme Court precedent makes clear, however, that prudential standing is not jurisdictional. Prudential standing concerns who may sue; it is an aspect of the cause of action that stems from the Administrative Procedure Act's limiting its cause of action to "aggrieved" parties. *See Bond v. United States*, 131 S. Ct. 2355, 2362-63 (2011); *Steel Co. v. Citizens for a Better Environment*, 523 U.S. 83, 97 & n.2 (1998).[3] Prudential standing is not jurisdictional

[3] The APA provides: "A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof." 5 U.S.C. § 702.

because prudential standing has not been ranked by Congress as jurisdictional and is not a limitation on a court's authority to hear a case, as opposed to a limitation on who may sue to challenge a particular agency action. *See Reed Elsevier, Inc. v. Muchnick*, 130 S. Ct. 1237, 1243-44 (2010).

In recent years, the terminology of jurisdiction has been put under a microscope at the Supreme Court. And the Court has not liked what it has observed – namely, sloppy and profligate use of the term "jurisdiction" by lower courts and, at times in the past, the Supreme Court itself. These recent Supreme Court cases have significantly tightened and focused the analysis governing when a statutory requirement is jurisdictional. In *Reed Elsevier*, for example, the Court emphasized that a statutory requirement is jurisdictional when it speaks to the power of a court to hear a case rather than to the rights of or restrictions on the parties. *Id.* at 1243; *see also Gonzalez v. Thaler*, 132 S. Ct. 641, 648 (2012) ("Recognizing our less than meticulous use of the term in the past, we have pressed a stricter distinction between truly jurisdictional rules, which govern a court's adjudicatory authority, and nonjurisdictional claim-processing rules, which do not.") (internal quotation marks omitted); *Henderson ex rel. Henderson v. Shinseki*, 131 S. Ct. 1197, 1202-03 (2011) ("We have urged that a rule should not be referred to as jurisdictional unless it governs a court's adjudicatory capacity, that is, its subject-matter or personal jurisdiction. Other rules, even if important and mandatory, we have said, should not be given the jurisdictional brand.") (citations omitted); *Bowles v. Russell*, 551 U.S. 205, 213 (2007) ("the notion of subject-matter jurisdiction obviously extends to classes of

cases falling within a court's adjudicatory authority") (internal quotation marks and ellipsis omitted); *Arbaugh v. V & H Corp.*, 546 U.S. 500, 510 (2006) ("Jurisdiction, this Court has observed, is a word of many, too many, meanings.") (internal quotation marks omitted); *Kontrick v. Ryan*, 540 U.S. 443, 455 (2004) ("Clarity would be facilitated if courts and litigants used the label 'jurisdictional' not for claim-processing rules, but only for prescriptions delineating the classes of cases (subject-matter jurisdiction) and the persons (personal jurisdiction) falling within a court's adjudicatory authority.").

The APA cause of action – which speaks in terms of giving "aggrieved" parties a cause of action – does not address the power of the court to hear the case. Therefore, it is quite obviously not jurisdictional under the recent Supreme Court precedents.

Indeed, although the Supreme Court has not yet directly addressed whether prudential standing is jurisdictional, the Court has suggested that it is not. In *Tenet v. Doe*, the Court noted that prudential standing is a "threshold question" that "may be resolved *before addressing jurisdiction*." 544 U.S. 1, 7 n.4 (2005) (emphasis added). While that snippet alone may be too thin a reed on which to base a definitive conclusion, it certainly is consistent with the thrust of the recent Supreme Court precedents on jurisdiction and points us further in the direction of saying that prudential standing is not jurisdictional.

Several courts of appeals have addressed the prudential standing issue in recent years – that is, since the Supreme Court's intensified focus on proper use of the term jurisdiction. And those courts likewise have determined that prudential standing is not ju-

risdictional. *See*, *e.g.*, *Board of Mississippi Levee Commissioners v. EPA*, 674 F.3d 409, 417 (5th Cir. 2012) ("Unlike constitutional standing, prudential standing arguments may be waived."); *Independent Living Center of Southern California, Inc. v. Shewry*, 543 F.3d 1050, 1065 n.17 (9th Cir. 2008) ("Unlike the Article III standing inquiry, whether ILC maintains prudential standing is not a jurisdictional limitation on our review. By failing to articulate any argument challenging ILC's prudential standing, the Director has waived that argument.") (citation and internal quotation marks omitted); *Rawoof v. Texor Petroleum Co.*, 521 F.3d 750, 756 (7th Cir. 2008) ("Prudential-standing doctrine is not jurisdictional in the sense that Article III standing is.") (internal quotation marks omitted); *Finstuen v. Crutcher*, 496 F.3d 1139, 1147 (10th Cir. 2007) ("Prudential standing is not jurisdictional in the same sense as Article III standing. . . . We could therefore decline to address this argument, as it was not raised in the court below."); *Gilda Industries, Inc. v. United States*, 446 F.3d 1271, 1280 (Fed. Cir. 2006) ("In the end, we do not need to reach or decide the question whether Gilda satisfies the standing requirements of the Administrative Procedure Act, because the government did not contend in its brief that Gilda's complaint should be barred by the zone of interests test. The government has thus waived that argument."); *see also, e.g.*, *American Iron & Steel Institute v. OSHA*, 182 F.3d 1261, 1274 n.10 (11th Cir. 1999) ("We can pretermit the more difficult question regarding whether the Doctors' members' interests fall within the zone of interests protected by the OSH Act because pruden-

tial standing is flexible and not jurisdictional in nature.") (citations omitted).[4]

---

[4] Some older cases from this Court said that prudential standing was jurisdictional. *See, e.g., Animal Legal Defense Fund, Inc. v. Espy*, 29 F.3d 720, 723 n.2 (D.C. Cir. 1994). But our more recent cases have indicated that prudential standing is not jurisdictional. *See American Chiropractic Ass'n v. Leavitt*, 431 F.3d 812, 816 (D.C. Cir. 2005) (contrasting "the less-than-demanding zone-of-interest test" with "[t]he jurisdictional question"); *Toca Producers v. FERC*, 411 F.3d 262, 265 n.* (D.C. Cir. 2005) ("the prudential standing doctrine, like the abstention doctrine, represents the sort of threshold question that may be resolved before addressing jurisdiction") (internal quotation marks and brackets omitted); *Amgen Inc. v. Smith*, 357 F.3d 103, 111 (D.C. Cir. 2004) ("That Amgen has prudential standing does not resolve this appeal, however. Another threshold issue is whether the court has jurisdiction to entertain Amgen's complaint."); *see also Oryszak v. Sullivan*, 576 F.3d 522, 527 (D.C. Cir. 2009) (Ginsburg, J., concurring) (citing *Tenet*, 544 U.S. at 6 n.4).

To the extent older cases assumed prudential standing to be jurisdictional, that assumption is no longer correct after Supreme Court cases such as *Reed Elsevier*. There, the Supreme Court expressly "encouraged federal courts" to pay better attention to the distinction between jurisdictional and non-jurisdictional statutory requirements and stated that a statutory limitation generally is jurisdictional only if it speaks to the power of the courts. 130 S. Ct. at 1243-44; *see also Gonzalez*, 132 S. Ct. at 648 ("Courts, we have said, should not lightly attach those drastic consequences to limits Congress has enacted.") (internal quotation marks omitted); *Kontrick*, 540 U.S. at 455 ("Clarity would be facilitated if courts and litigants used the label 'jurisdictional' not for claim-processing rules, but only for prescriptions delineating the classes of cases (subject-matter jurisdiction) and the persons (personal jurisdiction) falling within a court's adjudicatory authority.").

I certainly respect Judge Tatel's different view on the sta-

In short, respondent EPA has not raised prudential standing. EPA has thus forfeited the argument. Contrary to the weight of authority and the direction marked by the Supreme Court, the majority opinion here concludes that prudential standing is jurisdictional. *See* Maj. Op. at 2, 15-17. The majority opinion thus creates a deep and important circuit split on this important issue. In my respectful view, the Supreme Court's recent decisions on jurisdiction show that the majority opinion is incorrect on this point.[5]

Even if prudential standing were jurisdictional and we therefore had to consider the issue notwithstanding EPA's failure to raise it, I would conclude that the food group has prudential standing for either of two independent reasons.

---

tus of this Court's older precedents on this issue. But I believe our duty here is to obey the clear charge given by the Supreme Court rather than to cling to a stale slice of our precedent – precedent which not only has been undermined by subsequent Supreme Court decisions but also has not been followed by our Court in several recent cases.

[5] To be sure, intervenor Growth Energy has raised prudential standing even though EPA did not. But this Court has repeatedly held that intervenors generally may not raise arguments not raised by the parties. *See, e.g., Illinois Bell Telephone Co. v. FCC*, 911 F.2d 776, 786 (D.C. Cir. 1990). There is no reason to depart from that general rule here.

Indeed, the rule preventing expansion of the case by intervenors serves important purposes, especially in our administrative law jurisprudence. The Government as defendant or respondent may want to waive or forfeit certain non-jurisdictional, non-merits threshold defenses so as to permit or obtain a ruling on the merits. In our adversary legal system, an intervenor does not and should not have the unilateral right to thwart the Government's ability to waive non-jurisdictional, non-merits threshold defenses to suit.

First, members of the food group are "aggrieved" parties. To be "aggrieved" for purposes of the APA and to have prudential standing, a party must be "arguably within the zone of interests to be protected or regulated by the statute that he says was violated." *Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians v. Patchak*, 132 S. Ct. 2199, 2210 (2012) (internal quotation marks omitted). The Supreme Court has repeatedly emphasized that prudential standing is a low bar, writing just a few months ago: "The prudential standing test . . . is not meant to be especially demanding. . . . We do not require any indication of congressional purpose to benefit the would-be plaintiff. And we have always conspicuously included the word 'arguably' in the test to indicate that the benefit of any doubt goes to the plaintiff. The test forecloses suit only when a plaintiff's interests are so marginally related to or inconsistent with the purposes implicit in the statute that it cannot reasonably be assumed that Congress intended to permit the suit." *Id.* (footnote, citation, and some internal quotation marks omitted).

Importantly, in "determining whether a petitioner falls within the zone of interests to be protected by a statute, we do not look at the specific provision said to have been violated in complete isolation, but rather in combination with other provisions to which it bears an integral relationship." *National Petrochemical & Refiners Ass'n v. EPA*, 287 F.3d 1130, 1147 (D.C. Cir. 2002) (internal quotation marks and brackets omitted); *see also Clarke v. Securities Industry Ass'n*, 479 U.S. 388, 401 (1987) ("In considering whether the 'zone of interest' test provides or denies standing in these cases, we first observe that the Comptroller's argument focuses too narrowly on

12 U.S.C. § 36, and does not adequately place § 36 in the overall context of the National Bank Act. As *Data Processing* demonstrates, we are not limited to considering the statute under which respondents sued, but may consider any provision that helps us to understand Congress' overall purposes in the National Bank Act.").

Here, analysis of the overall statutory scheme shows that the food group has prudential standing. The Energy Independence and Security Act of 2007 imposes a renewable fuel mandate that requires introducing increasing amounts of renewable fuel into the market every year. *See* 42 U.S.C. § 7545(*o*)(2)(B)(i)(I). The Act's renewable fuel mandate expressly commands EPA to take account of the effect on "food prices" – that is, the price of corn. 42 U.S.C. § 7545(*o*)(2)(B)(ii)(VI). The balance Congress struck in the renewable fuel mandate thus expressly incorporates effects on food prices. At the same time, another statutory provision – in the same section of the U.S. Code – requires EPA to review and approve renewable fuel additives such as ethanol to make sure the fuel complies with clean air standards. Those statutory provisions together reflect a balance among the interests of corn farmers, the petroleum industry, the food industry, and the environment, among other interests. Because the E15 waiver is necessary – at least in the current market – to effectuate the statutory renewable fuel mandate, and because the food group is explicitly within the zone of interests for the renewable fuel mandate, the food group is in the zone of interests for purposes of this suit.[6]

---

[6] One respected commentator has summarized the Su-

That conclusion is fortified by the Supreme Court's decision just a few months ago in *Match-E-Be-Nash-She-Wish Band*, 132 S. Ct. at 2210-12. There, a residential property owner claimed that the Interior Department violated federal law – the Indian Reorganization Act – when it acquired a parcel of land *from someone else* for use by an Indian tribe as a casino. *See id.* at 2202-03. Perhaps needless to say, but the Indian Reorganization Act was not designed to benefit or regulate a property owner who objects when the Federal Government acquires *another* property owner's land in order to help Indians. The Supreme Court nonetheless concluded that prudential standing was satisfied. When the "Secretary obtains land for Indians" under this statute, "she does not do so in a vacuum. Rather, she takes title to properties with at least one eye directed toward how tribes will use those lands to support economic development." *Id.* at 2211. Although the statute in question "specifically addresses only land acquisition," decisions under the statute "are closely enough and often enough entwined with considerations of land use to make that difference immaterial." *Id.* at 2211-12. "And so neighbors to the use (like Patchak) are reasonable – indeed, predictable – challengers of the Secretary's decisions: Their interests, whether economic, environmental, or aesthetic, come within § 465's regulatory ambit." *Id.* at 2212.

---

preme Court's zone of interest precedents as follows: "An injured plaintiff has standing under the APA unless Congress intended to preclude judicial review at the behest of parties in plaintiff's class." 3 RICHARD J. PIERCE, JR., ADMINISTRATIVE LAW TREATISE § 16.9, at 1521 (5th ed. 2010). The statutes at issue here certainly do not reveal any such "intent to preclude" suits by the food group.

Here, EPA's waiver decisions were similarly made with "at least one eye" toward the renewable fuel mandate. EPA acknowledged as much when proposing the E15 waiver. *See* Notice of Receipt of a Clean Air Act Waiver Application to Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Request for Comment, 74 Fed. Reg. 18,228, 18,229 (Apr. 21, 2009) ("Growth Energy maintains that under the renewable fuel program requirements of the Energy Independence and Security Act of 2007, which is now primarily satisfied by the use of ethanol in motor vehicle gasoline, there exists a 'blend barrier' or 'blendwall' by which motor vehicle gasoline in the U.S. essentially will become saturated with ethanol at the 10 volume percent level very soon. Growth Energy maintains that a necessary first step is to increase the allowable amount of ethanol in motor vehicle gasoline up to 15 percent (E15) in order to delay the blendwall. . . . Growth Energy claims that the 'blendwall' will make those renewable fuel mandates unreachable and that there are substantial environmental benefits associated with higher ethanol blends."). Because the renewable fuel mandate in turn specifically takes account of food prices, it is reasonable and predictable to think of members of the food group as proper plaintiffs to challenge these waivers. What this Court said in the decision that was affirmed in *Match-E-Be-Nash-She-Wish Band* bears repeating: "As a practical matter it would be very strange to deny Patchak standing in this case. His stake in opposing the Band's casino is intense and obvious. The zone-of-interests test weeds out litigants who lack a sufficient interest in the controversy, litigants whose interests are so marginally related to or inconsistent with the purposes implicit in

the statute that it cannot reasonably be assumed that Congress intended to permit the suit. Patchak is surely not in that category." *Patchak v. Salazar*, 632 F.3d 702, 707 (D.C. Cir. 2011) (citation and internal quotation marks omitted). So too with the food group here.

Second, even apart from that analysis of Congress's intent in these ethanol statutes, the food group has prudential standing because it is complaining about an agency's allegedly illegal decision to loosen restrictions on a competitor of the food group – namely, the petroleum group, which competes against the food group in the upstream market for purchasing corn. Prudential standing does not prevent businesses from complaining about allegedly illegal regulation of their competitors. On the contrary, that has been the precise scenario in several Supreme Court cases where the Court found prudential standing. *See, e.g.*, *Clarke*, 479 U.S. at 403 ("competitors who allege an injury that implicates the policies of the National Bank Act are very reasonable candidates to seek review of the Comptroller's rulings"); *Ass'n of Data Processing Service Organizations, Inc. v. Camp*, 397 U.S. 150, 153-56 (1970) (sellers of data processing service have prudential standing to challenge decision allowing bank to compete in offering those services). Our cases reveal that business competitors in upstream as well as downstream markets have prudential standing. *See, e.g.*, *Sherley*, 610 F.3d at 75 ("We conclude the Doctors have prudential standing. The Dickey-Wicker Amendment clearly limits the funding of research involving human embryos. Because the Act can plausibly be interpreted to limit research involving ESCs, the Doctors' interest in preventing the NIH from funding such research is

not inconsistent with the purposes of the Amendment. . . . [T]hat is all that matters."). Here, the food group directly competes with gasoline and ethanol producers in the upstream market for purchasing corn as a raw material. Based on those competitor standing precedents as well, the food group has prudential standing.

B

In the alternative, even if the food group does not have standing, the petroleum group does. The petroleum group consists of companies that produce, refine, transport, and store gasoline, ethanol, and gasoline-ethanol blends. Under the statutory renewable fuel mandate, petroleum companies are forced to introduce a significant amount of renewable fuel into the Nation's gasoline supply. Using only E10 (gasoline with up to 10% ethanol), the petroleum group companies could not meet the statutory renewable fuel mandate. As a result of the E15 waiver in conjunction with the renewable fuel mandate, however, members of the petroleum group now may – and as a factual matter, *must* – use E15 (gasoline with up to 15% ethanol) in order to meet the renewable fuel mandate. Those businesses will incur considerable economic costs to modify their production, refining, transportation, and storage methods. Those costs are clearly injuries for purposes of standing. The only question here is whether those injuries are caused by EPA's E15 waiver.

EPA has not challenged the petroleum group's Article III or prudential standing. Again, I find that silence a telling indicator that the petroleum group has standing. Moreover, the majority opinion does not dispute that the petroleum group has prudential

standing. But according to the majority opinion, the petroleum group has not satisfied the causation prong of Article III standing. The majority opinion holds that the petroleum group's injury is self-imposed and not caused by EPA's E15 waiver. I disagree.

Causation requires injury that is "fairly traceable to the defendant's allegedly unlawful conduct." *Allen v. Wright*, 468 U.S. 737, 751 (1984). It is of course true that causation can be defeated by voluntary action – purely self-inflicted injury is not fairly traceable to the actions of another. *See Petro-Chem Processing, Inc. v. EPA*, 866 F.2d 433, 438 (D.C. Cir. 1989). But causation "is not defeated merely because the plaintiff has in some sense contributed to his own injury"; causation "is defeated only if it is concluded that the injury is so completely due to the plaintiff's own fault as to break the causal chain." 13A CHARLES ALAN WRIGHT ET AL., FEDERAL PRACTICE AND PROCEDURE § 3531.5 (3d ed. 2008).

To show causation, the petroleum group must demonstrate a "substantial probability" that the E15 will cause at least one of its members to incur higher costs. *Sierra Club v. EPA*, 292 F.3d 895, 899 (D.C. Cir. 2002). To be sure, the E15 waiver *alone* does not require the petroleum group to use E15, make changes, and incur costs. But we cannot consider the E15 waiver in some kind of isolation chamber. The Energy Independence and Security Act imposes a renewable fuel mandate that requires a certain amount of renewable fuel to be introduced into the market every year. Pursuant to that law, an increasing amount of renewable fuel such as ethanol – rising to 36 billion gallons in 2022 – must be introduced

into the market. 42 U.S.C. § 7545(*o*)(2)(B)(i)(I). EPA regulations identify petroleum refiners and importers who produce gasoline as "obligated" parties – they are responsible for introducing a percentage of the required amount into the market each year. 40 C.F.R. § 80.1406; *see also* 40 C.F.R. §§ 80.1407, 80.1427.

Before the E15 waiver, however, petroleum producers likely could not meet the requirement set by the statutory renewable fuel mandate. Now that EPA has allowed E15 onto the market, producers likely can meet the renewable fuel mandate – but they *must* produce E15 in order to do so. So the combination of the renewable fuel mandate *and* the E15 waiver will force gasoline producers to produce E15. In tort law, when two acts combine to create an injury, both acts are considered causes of the injury. So it is here. In the current market, there is at least a "substantial probability" that, in the wake of the E15 waiver, gasoline producers will have to use E15 in order to meet the renewable fuel mandate. And that's all that the petroleum group needs to show to carry its burden on the causation issue.

Put another way, the renewable fuel mandate directly regulates gasoline producers and requires them to introduce a certain amount of ethanol. But there was an impediment preventing the producers from meeting that mandate. The E15 waiver removed the impediment, meaning that gasoline producers now will have to use E15 to meet the mandate's requirements. On those facts, the petroleum group's injury is not self-imposed, but is directly caused by the agency action under review in this case. For those reasons, the petroleum group has Ar-

ticle III standing to challenge the E15 waiver provision.

The majority opinion concludes otherwise. But the fundamental flaw in the majority opinion's reasoning is its belief that petroleum producers could meet the renewable fuel mandate without using E15. In the current market, the majority opinion's assumption is simply incorrect as a matter of fact.

One way to answer the causation question in this case is to ask the following: In the real world, does the petroleum industry have a realistic choice not to use E15 and still meet the statutory renewable fuel mandate? The answer is no, and intervenor Growth Energy's claim to the contrary seems rooted in fantasy.[7]

As to prudential standing for the petroleum group, EPA does not raise the issue, meaning again that it's forfeited. In any event, the majority opinion itself does not dispute that the petroleum group is in the zone of interests and has prudential standing. Petroleum producers are directly regulated parties. And parties directly regulated by a statute are within that statute's zone of interest. Thus, it is undisputed

---

[7] Under the majority opinion's approach, it appears that a citizen who breathes air (or at least a citizen who has breathing problems) would have standing to challenge the E15 waiver. That's because the E15 waiver will cause emissions that will negatively affect air quality. There is of course no such petitioner involved in this suit. But standing law protects economic interests as well as health interests. And the economic interests of the food and petroleum groups are palpably and significantly affected by the E15 waiver, just as are the health interests of citizens with breathing issues.

and indisputable that the petroleum group has prudential standing.

II

Having found that there is standing, I turn to the merits of this case. The merits are not close. In granting the E15 partial waiver, EPA ran roughshod over the relevant statutory limits.

Section 211(f)(1) of the Clean Air Act prohibits manufacturers of fuel or fuel additives from introducing new fuels or fuel additives into commerce for use in car models made after 1974, unless the new fuel or fuel additive is "substantially similar" to certain fuels or fuel additives already in use. 42 U.S.C. § 7545(f)(1)(B). All agree that E15 is not substantially similar to fuels already in use. But Section 211(f)(4) allows EPA to waive that prohibition if EPA "determines that the applicant has established that such fuel or fuel additive or a specified concentration thereof, and the emission products of such fuel or fuel additive or specified concentration thereof, will not cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is used) to achieve compliance by the vehicle or engine with the emission standards with respect to which it has been certified." 42 U.S.C. § 7545(f)(4) (emphasis added). Put in plain English, in order to approve a waiver, EPA must find that the proposed new fuel will not cause any car model made after 1974 to fail emissions standards.

Here, EPA issued a waiver for E15 even though it acknowledged that E15 likely would contribute to the failure of some cars made after 1974 (namely, those

made between 1975 and 2000) to achieve compliance with emissions standards. EPA maintains that E15 will not contribute to the failure of emissions control systems in cars built in 2001 and later. But EPA concedes that E15 likely *will* contribute to the failure of emissions control systems in some cars built before 2001.

EPA's E15 waiver thus plainly runs afoul of the statutory text. EPA's disregard of the statutory text is open and notorious – and not much more needs to be said.

EPA does throw out a few arguments to try to get around the text of the statute. None is persuasive.

First, EPA tries to weave ambiguity out of clarity in the statutory text. EPA contends that the statute does not expressly address partial waivers. But as petitioners aptly respond in their brief, to suggest "'that *Chevron* step two is implicated any time a statute does not expressly *negate* the existence of a claimed administrative power (*i.e.*, when the statute is not written in 'thou shalt not' terms), is both flatly unfaithful to the principles of administrative law, and refuted by precedent.'" Petitioners' Reply Br. 8-9 (quoting *API v. EPA*, 52 F.3d 1113, 1120 (D.C. Cir. 1995)). There is no plausible way to read this statute as allowing partial waivers of the kind granted by EPA here.

EPA also suggests that a plain text reading of the statute would be absurd – "[c]learly Congress did not mean to require testing of every vehicle or engine." EPA Br. 23. But that argument confuses methods with standards. As to *methods*, the statute may allow EPA to test a reasonable sample of vehicles and extrapolate from those results to conclude that a new

fuel will not cause any vehicles to fail their emissions tests. But the *standard* remains that a new fuel cannot cause any vehicles to fail their emissions tests. Just because EPA can restrict its testing to a reasonable sample does not mean that EPA can restrict its waivers to a subset.

EPA then invokes the purpose and legislative history of the waiver statute. With respect to purpose, there is no single purpose to this statute. Like many statutes, this one represents a complex balancing of competing interests and a slew of compromises. Congress did not pursue one purpose at all costs. *Cf. Freeman v. Quicken Loans, Inc.*, 132 S. Ct. 2034, 2044 (2012) ("No legislation pursues its purposes at all costs") (citation and brackets omitted). Courts respect the legislative process – and the myriad of interests reflected in complex legislation – by hewing to the statutory text and not trying to cherry-pick one purpose from a multitude of overlapping and sometimes conflicting congressional purposes. As to the legislative history, to the extent it's relevant, nothing in it suggests that Congress intended to allow partial waivers. In any event, as the Supreme Court has repeatedly reminded us, the text of the statute controls. *See, e.g.*, *Mohamad v. Palestinian Authority*, 132 S. Ct. 1702, 1709-11 (2012); *Milner v. Department of the Navy*, 131 S. Ct. 1259, 1266-67 (2011). And the text here is straightforward and clear.

EPA separately claims that it has traditionally interpreted the statute as allowing conditional waivers, and that this partial waiver is like a conditional waiver. Even if the statute allows conditional waivers, conditional waivers are not the same as partial

waivers. Conditional waivers generally attach conditions to the *fuel*, but such waivers do not attach limitations on the kind of vehicles that can use that fuel, which is the nature of the waiver at issue here and is precisely what the statute does not permit.

If Congress wanted to authorize this kind of partial waiver, it could easily have said so (and going forward, could still easily do so). After all, the statute elsewhere allows EPA to partially waive other statutory requirements. *See, e.g.,* 42 U.S.C. § 7545(k)(2)(A) (Administrator may "adjust (or waive entirely)" certain emissions requirements); 42 U.S.C. § 7545(m)(3)(A) (Administrator shall "waive, in whole or in part," oxygenated gasoline requirements that would prevent or interfere with the attainment of certain air quality standards); 42 U.S.C. § 7545(*o*)(7)(A) (Administrator may waive "in whole or in part" requirements of renewable fuel mandate). But Congress didn't authorize partial waivers in the waiver provision involved in this case.

* * *

The food group petitioners and the petroleum group petitioners each independently have standing to challenge EPA's E15 waiver. On the merits, EPA's E15 waiver is flatly contrary to the plain text of the statute. I would grant the petition for review and vacate EPA's E15 waiver decision. I respectfully dissent.

APPENDIX 2

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OAR–2009–0211; FRL–9215–5]

Partial Grant and Partial Denial of Clean Air Act Waiver Application Submitted by Growth Energy To Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Decision of the Administrator

Thursday, November 4, 2010

AGENCY: Environmental Protection Agency.

ACTION: Notice of partial waiver decision.

SUMMARY: The Environmental Protection Agency (EPA) is partially granting Growth Energy's waiver request application submitted under section 211(f)(4) of the Clean Air Act. This partial waiver allows fuel and fuel additive manufacturers to introduce into commerce gasoline that contains greater than 10 volume percent ethanol and no more than 15 volume percent ethanol (E15) for use in certain motor vehicles if certain conditions are fulfilled. We are partially approving the waiver for and allowing the introduction into commerce of E15 for use only in model year 2007 and newer light-duty motor vehicles, which includes passenger cars, light-duty trucks and medium-duty passenger vehicles. We are denying the waiver for introduction of E15 for use in model year 2000 and older light-duty motor vehicles, as well as all heavy-duty gasoline engines and vehicles, highway and off-highway motorcycles, and nonroad engines, vehicles, and equipment. The Agency is deferring a decision on the applicability of a waiver to model year 2001 through 2006 light-duty motor vehicles until additional test data, currently under development, is available.

[CONTENT OMITTED]

I. Executive Summary

In March 2009, Growth Energy and 54 ethanol manufacturers petitioned the Environmental Protection Agency ("EPA" or "The Agency") to allow the introduction into commerce of up to 15 volume percent (vol%) ethanol in gasoline. In April 2009, EPA sought public comment on the Growth Energy petition and subsequently received about 78,000 comments. Prior to today's action, ethanol was limited to 10 vol% in motor vehicle gasoline (E10).

In today's action, EPA is partially granting Growth Energy's waiver request based on our careful analysis of the available information, including test data and public comments. This partial grant waives the prohibition on fuel and fuel additive manufacturers on the introduction into commerce of gasoline containing greater than 10 vol% ethanol and no more than 15 vol% ethanol (E15) for use in certain motor vehicles. More specifically, today's action has two components. First, we are approving the waiver for and allowing the introduction into commerce of E15 for use in Model Year (MY) 2007 and newer light-duty motor vehicles, which includes passenger cars, light-duty trucks, and medium-duty passenger vehicles.[1] Second, we are denying the waiver for intro-

[1] For purposes of today's decision, "MY2007 and newer light-duty motor vehicles" include MY2007 and newer light-duty motor vehicles (LDV), light- duty trucks (LDT), and medium-duty passenger vehicles (MDPV).

duction into commerce of E15 for use in MY2000 and older light-duty motor vehicles, as well as heavy-duty gasoline highway engines and vehicles (*e.g.*, delivery trucks). Highway and off-highway motorcycles, and nonroad engines, vehicles, and equipment (nonroad products; *e.g.*, boats, snowmobiles, and lawnmowers) typically use the same gasoline as highway motor vehicles; this decision is also a denial of a waiver for introducing motor vehicle gasoline into commerce containing more than 10 vol% ethanol for use in all of those products. The Agency is deferring a decision on the applicability of a waiver with respect to MY2001–2006 light-duty motor vehicles to await additional test data. The Department of Energy (DOE) has stated that it will complete testing on these vehicles in November, after which EPA will take appropriate action.

To help ensure that E15 is only used in MY2007 and newer light-duty motor vehicles, EPA has developed a proposed rule (described below) with the express purpose of mitigating the potential for misfueling of E15 into vehicles and engines not approved for its use. EPA believes the proposed safeguards against misfueling would provide the most practical way to mitigate the potential for misfueling with E15. Moreover, the proposed rule, when adopted, would satisfy the misfueling mitigation conditions of today's partial waiver described below and would promote the successful introduction of E15 into commerce. However, if parties covered by this waiver (fuel and fuel additive manufacturers, which include renewable fuel producers and importers, petroleum refiners and importers, and ethanol blenders) desire to introduce E15 into commerce prior to a final rule being issued, they may do so provided they

submit and EPA approves a plan that demonstrates that the misfueling mitigation conditions will be satisfied. In addition to the misfueling mitigation conditions, E15 must also meet certain fuel quality specifications before it may be introduced into commerce.

To receive a waiver, as prescribed by the Clean Air Act, a fuel or fuel additive manufacturer must demonstrate that a new fuel or fuel additive will not cause or contribute to the failure of an engine or vehicle to achieve compliance with the emission standards to which it has been certified over its useful life. Reflecting that EPA's emission standards have continued to evolve and become more stringent over time, the in-use fleet is composed of vehicles and engines spanning not only different technologies, but also different emissions standards. Since ethanol affects different aspects of emissions, a wide range of data and information covering a wide range of highway and nonroad vehicles, engines, and equipment would be necessary for approval of an E15 waiver that would allow E15 to be introduced into commerce for use in all motor vehicles and all other engines and vehicles using motor vehicle gasoline ("full waiver"). Growth Energy did not provide the necessary information to support a full waiver in several key areas, especially long-term durability emissions data necessary to ensure that all motor vehicles, heavy-duty gasoline highway engines and vehicles, highway and off- highway motorcycles and nonroad products would continue to comply with their emission standards over their full useful life. In 2008, DOE began emissions durability testing on 19 Tier 2 motor vehicle models that would provide this data for MY2007 and newer light-duty motor vehicles ("DOE Catalyst

Study").[2] Consequently, the Agency delayed a decision until the DOE test program was completed for these motor vehicles in September 2010.

EPA reached its decision on the waiver request based on the results of the DOE Catalyst Study and other information and test data submitted by Growth Energy and in public comments. EPA also applied engineering judgment, based on the data in reaching its decision. Specifically, consistent with past waiver decisions, the Agency evaluated Growth Energy's waiver request and made its decision based on four factors: (1) Exhaust emissions impacts – long-term (known as durability) and immediate; (2) evaporative system impacts – both immediate and long-term; (3) the impact of materials compatibility on emissions; and, (4) the impact of drivability and operability on emissions. The Agency's conclusions are summarized below and additional information on each subject is provided later in this decision document.

MY2007 and Newer Light-Duty Motor Vehicles

For MY2007 and newer light-duty motor vehicles, the DOE Catalyst Study and other information before EPA adequately demonstrates that the impact of E15 on overall emissions, including both immediate[3]

---

[2] DOE embarked on the study, in consultation with EPA, auto manufacturers, fuel providers and others, after enactment of the Energy Independence and Security Act of 2007, which significantly expanded the Federal Renewable Fuel Standard Program for increasing the use of renewable fuels in transportation fuel in order to reduce imported petroleum and emissions of greenhouse gases.

[3] In past waiver decisions, we have referred to 'immediate" emissions as "instantaneous" emissions. "Immediate" and

and durability related emissions, will not cause or contribute to violations of the emissions standards for these motor vehicles. Likewise, the data and information adequately show that E15 will not lead to violations of the evaporative emissions standards, so long as the fuel does not exceed a Reid Vapor Pressure (RVP) of 9.0 psi in the summertime control season.[4] The information on materials compatibility and drivability also supports this conclusion.

Durability/Long-Term Exhaust Emissions

The DOE Catalyst Study involved 19 high sales volume car and light-duty truck models (MY2005–2009 motor vehicles produced by the top U.S. sales-based automobile manufacturers) that are all designed for and subject to the Tier 2 motor vehicle emission standards. The purpose of the program was to evaluate the long term effects of E0 (gasoline that contains no ethanol and is the certification test fuel for emissions testing), E10, E15, and E20 (a gasoline-ethanol blend containing 20 vol% ethanol) on the durability of the exhaust emissions control system, especially the catalytic converter (catalyst), for Tier 2 motor vehicles. Analysis of the motor vehicles' emissions results at full useful life (120,000 miles) and emissions deterioration rates showed no significant difference between the E0 and E15 fueled groups.

"instantaneous" are synonymous in this context.

[4] EPA regulates the vapor pressure of gasoline sold at retail stations during the summer ozone season (June 1 to September 15) to reduce evaporative emissions from gasoline that contribute to ground-level ozone and diminish the effects of ozone-related health problems. Gasoline needs a higher vapor pressure in the wintertime for cold start purposes.

Three motor vehicles aged on E0 fuel had failing emissions levels and one additional motor vehicle failed one of several replicate tests. One E15-aged motor vehicle had failing emissions.[5] However, none of the emissions failures appeared to be related to the fuel used. There were no emissions component or material failures during aging that were related to fueling. In addition, a review of the emission deterioration rates over the course of the test program revealed no statistically significant difference in emissions deterioration with E15 in comparison to E0. Using standard statistical tools, the test results support the conclusion that E15 does not cause or contribute to the failure of MY2007 and newer light-duty motor vehicles in achieving their emissions standards over their useful lives. These results confirm EPA's engineering assessment that the changes manufacturers made to their motor vehicles (calibration, hardware, *etc.*) to comply with the Agency's stringent Tier 2 emission standards (which began to phase in with MY2004) have resulted in the capability of Tier 2 motor vehicles to accommodate the additional enleanment caused by E15 and be compatible with ethanol concentrations up to E15.[6]. EPA's certification data show that all gasoline-fueled cars and light-duty trucks were fully phased in to the Tier 2 standards by MY2007 even though the program did not require the phase-in to be complete until MY2009. Consequently, EPA believes it appropriate

---

[5] It should be noted that the Dodge Caliber vehicle aged on E15 failed Tier 2 Bin 5 FUL standards on E0. However, this vehicle met Tier 2 Bin 5 FUL standards when tested on E15. The Agency could not determine the cause.

[6] *See* 65 FR 6698 (February 10, 2000).

to apply these test results to all MY2007 and newer light-duty motor vehicles.

Immediate Exhaust Emissions

Scientific information supports a conclusion that motor vehicles experience an immediate emissions impact independent of motor vehicle age (and therefore emission control technology) when operating on gasoline- ethanol blends. Nitrogen oxide (NO_X) emissions generally increase while volatile organic compound (VOC) and carbon monoxide (CO) emissions decrease. The available data supports a conclusion that the immediate emissions impacts of E15 on Tier 2 motor vehicles are likely to have the same pattern as the immediate emissions impacts of E10 on older motor vehicles (*i.e.*, NO_X emissions increase while VOC and CO emissions decrease). Although the magnitude of the immediate impact is expected to be slightly greater with E15, Tier 2 motor vehicles generally have a significant compliance margin at the time of certification and later on in-use (when they are in customer service) that should allow them to meet their emission standards even if they experience the predicted immediate NO_X increases from E15 when compared to E0. The results of the DOE Catalyst Study reflect both the immediate emissions effects as well as any durability effects as described above, and the Tier 2 motor vehicles continued to comply with their emissions standards at their full useful life. As noted above, none of the emissions failures appeared to be related to the fuel used. Based on this immediate exhaust emissions information, coupled with the durability test data and conclusions, E15 is not expected to cause Tier 2 mo-

tor vehicles to exceed their exhaust standards over their useful lives when operated on E15.

Evaporative Emissions

Both diurnal and running loss evaporative emissions increase as fuel volatility increases. Diurnal evaporative emissions occur when motor vehicles are not operating and experience the change in temperature during the day, such as while parked. Running loss evaporative emissions occur while motor vehicles are being operated. Reid Vapor Pressure (RVP) is the common measure of the volatility of gasoline. E15 that meets an RVP limit of 9.0 pounds per square inch (psi) during the summer (which is equal to the RVP of E0) should not produce higher diurnal or running loss evaporative emissions than E0. We expect MY2007 and newer vehicles to meet evaporative emissions standard on 9.0 psi E15. There are concerns with E15 having an RVP greater than 9.0 psi. When ethanol is blended at 15 vol%, a 10.0 psi RVP fuel compared to 9.0 psi RVP fuel will have substantially higher evaporative emissions levels that must be captured by the emissions control system (a carbon filled canister and related system elements). This increase in evaporative emissions is beyond what manufacturers have been required to control, based on the motor vehicle certification testing for the emissions standards. Test results highlight the concern that fuel with an RVP greater than 9.0 psi during the summer will lead to motor vehicles exceeding their evaporative emission standards in-use. Additionally, as explained in the misfueling mitigation measures proposed rule, EPA interprets the 1.0 psi waiver in CAA section 211(h) as being limited to gasoline-ethanol blends that contain 10 vol% etha-

nol. Therefore, given the significant potential for increased evaporative emissions at higher gasoline volatility levels, and the lack of data to resolve how this would impact compliance with the emissions standards, today's waiver is limited to E15 with a summertime RVP no higher than 9.0 psi.

Other potential issues for evaporative emissions of motor vehicles operated on E15 are increased permeation and long- term (durability) impacts.[7] Available test data indicate that for Tier 2 motor vehicles any increase in evaporative emissions as a result of permeation is limited and within the evaporative compliance margins for these motor vehicles. This is consistent with the demonstration of evaporative emissions system durability after aging on E10 that was required beginning with the Tier 2 motor vehicle standards, for the purpose of limiting permeation. With respect to durability of the evaporative emissions control systems, data from several aspects of the DOE Catalyst Study point to the expected durability of the evaporative emissions control system of Tier 2 motor vehicles on E15. First, there appears to be no evidence of an increase in evaporative emissions system onboard diagnostic system codes being triggered by E15 compared to E0. Second, teardown results of the 12 motor vehicles tested (six models with E0 and six models with E15) found no abnormalities for E15 motor vehicles compared to E0 motor vehicles.[8] Finally, evaporative testing on four of

---

[7] Permeation refers to the migration of fuel molecules through the walls of elastomers used for fuel system components.

[8] Southwest Research Institute Project 08–58845 Status Report, "Powertrain Component Inspection from Mid-Level

the Tier 2 motor vehicles over the course of the test program found no increased deterioration in evaporative emissions with E15 in comparison to E0.[9] Therefore, after taking into account all of these sources of evaporative emissions data, the evidence supports a conclusion that as long as E15 meets a summertime control season gasoline volatility level of no higher than 9.0 psi, E15 is not expected to cause or contribute to exceedances of the evaporative emission standards over the full useful life of Tier 2 motor vehicles.

Materials Compatibility

Materials compatibility is a key factor in considering a fuel or fuel additive waiver insofar as poor materials compatibility can lead to serious exhaust and evaporative emission compliance problems not only immediately upon use of the new fuel or fuel additive, but especially over the full useful life of vehicles and engines. As part of its E15 waiver application, Growth Energy submitted a series of studies completed by the State of Minnesota and the Renewable Fuels Association (RFA) that investigated materials compatibility of motor vehicle engines and engine components using three test fuels: E0, E10, and E20. The materials studied included what were considered to be many of the common metals, elastomers, and plastics used in motor vehicle fuel systems.

Blends Vehicle Aging Study," September 6, 2010. See EPA–HQ–OAR–2009–0211– 14016.

[9] Environmental Testing Corporation NREL Subcontract JGC–9–99141–01 Presentation, 'Vehicle Aging and Comparative Emissions testing Using E0 and E15 Fuels: Evaporative Emissions Results," August 31, 2010. See EPA–HQ–OAR– 2009–0211–14015.

Growth Energy concluded that E15 would not be problematic for current automotive or fuel dispensing equipment. While directionally illustrative, the materials compatibility information submitted by Growth Energy does not encompass all materials used in motor vehicle fuel systems, and the test procedures used are not representative of the dynamic real-world conditions under which the materials must perform. The information is therefore insufficient by itself to adequately assess the potential material compatibility of E15. However, the information generated through the DOE Catalyst Study demonstrates that MY2007 and newer light-duty motor vehicles will not experience materials compatibility issues that lead to exhaust or evaporative emission exceedances. The DOE Catalyst Study supports the Agency's engineering assessment that newer motor vehicles such as those subject to EPA's Tier 2 standards, were designed to encounter more regular ethanol exposure compared to earlier model year motor vehicles. Other regulatory requirements also placed an emphasis on real world motor vehicle testing, which in turn prompted manufacturers to consider different available fuels when developing and testing their emissions systems. Additionally, beginning with Tier 2, the evaporative durability demonstration procedures required the use of E10. As a result, based on the information before us, we do not expect E15 to raise emissions related materials compatibility issues for Tier 2 motor vehicles.

Drivability and Operability

There is no evidence from any of the test programs cited by Growth Energy or in the data from the DOE Catalyst Study of driveability issues for Tier 2 motor

vehicles fueled with E15 that would indicate that use of E15 would lead to increased emissions or that might cause motor vehicle owners to want to tamper with the emission control system of their motor vehicle. The Agency reviewed the data and reports from the different test programs, and found no specific report of driveability or operability issues across the many different motor vehicles and duty cycles, including lab testing and in-use operation.

MY2000 and Older Light-Duty Motor Vehicles

For MY2000 and older motor vehicles, the data and information before EPA fail to adequately demonstrate that the impact of E15 on exhaust emissions – both immediate and durability-related – will not cause or contribute to violations of the emissions standards for these motor vehicles. MY2000 and older motor vehicles do not have the sophisticated emissions control systems of today's Tier 2 motor vehicles, and there is an engineering basis to believe they may experience conditions affecting catalyst durability that lead to emission increases if operated on E15. This emissions impact, over time, combined with the expected immediate increase in NOX emissions from the use of E15, provides a clear basis for concern that E15 could cause these motor vehicles to exceed their emissions standards over their useful lives. Furthermore, some MY2000 and older motor vehicles were likely designed for no more than limited exposure to ethanol, since gasoline- ethanol blends were not used in most areas of the country at the time they were designed. Their fuel systems, evaporative emissions control systems, and internal engine components may not have been designed and tested for long-term durability, materials compatibil-

ity, or drivability with fuels containing ethanol. The limited exhaust emissions durability test data, evaporative emissions durability test data, and real-world materials compatibility test data either provided by Growth Energy in their petition or available in the public domain do not address or resolve these concerns. Therefore, the information before the Agency is not adequate to make the demonstration needed to grant a waiver for the introduction into commerce of E15 for use in MY2000 and older light- duty motor vehicles.

MY2001–2006 Light-Duty Motor Vehicles

EPA is deferring a decision on MY2001–2006 light-duty motor vehicles. DOE is in the process of conducting additional catalyst durability testing that will provide data regarding MY2001–2006 motor vehicles. The DOE testing is scheduled to be completed by the end of November 2010. EPA will make the DOE test results available to the public and consider the results and other available data and information in making a determination on the introduction into commerce of E15 for use in those model year motor vehicles. EPA expects to make a determination for these motor vehicles shortly after the results of DOE testing are available.

Nonroad Engines, Vehicles, and Equipment (Nonroad Products)

The nonroad product market is extremely diverse. Nonroad products with gasoline engines include lawn mowers, chainsaws, forklifts, boats, personal watercraft, and all-terrain vehicles. Growth Energy did not provide information needed to broadly assess the potential impact of E15 on compliance of nonroad products with applicable emissions standards.

Nonroad products typically have more basic engine designs, fuel systems, and controls than light-duty motor vehicles. The Agency has reasons for concern with the use of E15 in nonroad products, particularly with respect to long-term exhaust and evaporative emissions durability and materials compatibility. The limited information provided by Growth Energy and commenters, or otherwise available in the public domain, did not alleviate these concerns. As such, the Agency cannot grant a waiver for introduction into commerce of E15 motor vehicle gasoline that is also for use in nonroad products.

Heavy-Duty Gasoline Engines and Vehicles

Given their relatively small volume compared to light-duty motor vehicles, heavy-duty gasoline engines and vehicles have not been the focus of test programs and efforts to assess the potential impacts of E15 on them. Growth Energy did not provide any data specifically addressing how heavy-duty gasoline engines' and vehicles' emissions and emissions control systems would be affected by the use of E15 over the full useful lives of these vehicles and engines. Additionally, from a historical perspective, the introduction of heavy-duty gasoline engine and vehicle technology has lagged behind the implementation of similar technology for light-duty motor vehicles. Similarly, emission standards for this sector have lagged behind those of light-duty motor vehicles, such that current heavy-duty gasoline engine standards remain comparable, from a technology standpoint to older light- duty motor vehicle standards. Consequently, we believe the concerns expressed above regarding MY2000 and older motor vehicles are also applicable to the majority of the in-use fleet

of heavy-duty gasoline engines and vehicles. As such, the Agency cannot grant a waiver for the introduction into commerce of E15 for use in heavy-duty gasoline engines and motor vehicles.

Highway and Off-Highway Motorcycles

Like heavy-duty gasoline engines and vehicles, highway and off-highway motorcycles have not been the focus of E15 test programs. Growth Energy did not provide any data addressing how motorcycle emissions and emissions control systems would specifically be affected by the use of E15 over their full useful lives. While newer motorcycles incorporate some of the advanced fuel system and emission control technologies that are found in passenger cars and light-duty trucks, such as electronic fuel injection and catalysts, many do not have the specific control technology of today's motor vehicles (advanced fuel trim control) that would allow them to adjust to the higher oxygen content of E15. More importantly, older motorcycles do not have any of these technologies and are therefore more on par with nonroad products in some cases and MY2000 and older motor vehicles in others. As such, the Agency cannot grant a waiver for the introduction into commerce of E15 for use in highway and off-highway motorcycles.

Conditions on Today's Partial Waiver

There are two types of conditions being placed on the partial waiver being granted today: Those for mitigating the potential for misfueling of E15 in all vehicles, engines and equipment for which E15 is not approved, and those addressing fuel and ethanol quality. All of the conditions are discussed further below and are listed in Section XII.

EPA believes that the misfueling mitigation measures in the proposed rule accompanying today's waiver decision would provide the most practical way to ensure that E15 is only used in vehicles for which it is approved. However, if any fuel or fuel additive manufacturer desires to introduce into commerce E15, gasoline intended for use as E15, or ethanol intended for blending with gasoline to create E15, prior to the misfueling mitigation measures rule becoming final and effective, they may do so provided they implement all of the conditions of the partial waiver, including an EPA- approved plan that demonstrates that the fuel or fuel additive manufacturer will implement the misfueling mitigation conditions discussed below.

Misfueling Mitigation Notice of Proposed Rulemaking (NPRM)

As mentioned above, EPA is proposing a regulatory program that would help mitigate the potential for misfueling with E15 and promote the successful introduction of E15 into commerce. The proposal includes several provisions that parallel the misfueling mitigation conditions on the E15 waiver. First, the proposed rule would prohibit the use of gasoline-ethanol blended fuels containing greater than 10 vol% and up to 15 vol% ethanol in vehicles and engines not covered by the partial waiver for E15. Second, the proposed rule would require all fuel dispensers to have a label if a retail station chooses to sell E15, and it seeks comment on separate labeling requirements for blender pumps and fuel pumps that dispense E85. Finally, the proposed rule would require product transfer documents (PTDs) specifying ethanol content and RVP to accompany the transfer

of gasoline blended with ethanol as well as a national survey of retail stations to ensure compliance with the these requirements. In addition to proposing actions to mitigate misfueling, the proposed rule would modify the Reformulated Gasoline ("RFG") program by updating the Complex Model to allow fuel manufacturers to certify batches of gasoline containing up to 15 vol% ethanol. Once adopted, these regulations would facilitate the introduction of E15 into commerce under this partial waiver, as certain requirements in the regulations would satisfy certain conditions in the waiver. If EPA adopts such a rule, EPA would consider any appropriate modifications to the conditions of this waiver.

II. Introduction

A. Statutory Background

Section 211(f)(1) of the Clean Air Act ("CAA" or "the Act") makes it unlawful for any manufacturer of any fuel or fuel additive to first introduce into commerce, or to increase the 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 206 of the Act. The Environmental Protection Agency ("EPA" or "the Agency") last issued an interpretive rule on the phrase "substantially similar" at 73 FR 22281 (April 25, 2008). Generally speaking, this interpretive rule describes the types of unleaded gasoline that are likely to be considered "substantially similar" to the unleaded gasoline utilized in EPA's certification program by placing limits on a gasoline's chemical composition as well as its physical proper-

ties, including the amount of alcohols and ethers (oxygenates) that may be added to gasoline. Fuels that are found to be "substantially similar" to EPA's certification fuels may be registered and introduced into commerce. The current "substantially similar" interpretive rule for unleaded gasoline allows oxygen content up to 2.7% by weight for certain ethers and alcohols.[10] E10 (a gasoline- ethanol blend containing 10 vol% ethanol) contains approximately 3.5% oxygen by weight and received a waiver of this prohibition by operation of law under section 211(f)(4).[11] E15 (gasoline- ethanol blended fuels containing greater than 10 vol% ethanol and up to 15 vol% ethanol) has greater than 2.7 wt% oxygen content, and Growth Energy has applied for a waiver under section 211(f)(4) of the Act.

Section 211(f)(4) of the Act provides that upon application of any fuel or fuel additive manufacturer, the Administrator may waive the prohibitions of section 211(f)(1) if the Administrator determines that the applicant has established that such fuel or fuel additive, or a specified concentration thereof, will not cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is

---

[10] *See* 56 FR 5352 (February 11, 1991).

[11] As explained at 44 FR 20777 (April 6, 1979), EPA did not grant or deny a waiver request for a fuel containing 90% unleaded gasoline and 10% ethyl alcohol within 180 days of receiving that request. By operation of a provision that was at that time included in section 211(f)(4), E10 was no longer subject to the prohibitions in CAA section 211(f)(1) of the Act. That provision has subsequently been removed.

used) to achieve compliance by the vehicle or engine with the emission standards to which it has been certified pursuant to sections 206 and 213(a). In other words, the Administrator may grant a waiver for a prohibited fuel or fuel additive if the applicant can demonstrate that the new fuel or fuel additive will not cause or contribute to engines, vehicles or equipment to fail to meet their emissions standards over their useful lives. The statute requires that the Administrator shall take final action to grant or deny the application, after public notice and comment, within 270 days of receipt of the application.

The current section 211(f)(4) reflects the following changes made by the Energy Independence and Security Act of 2007: (1) Requires consideration of the impact on nonroad engines and nonroad vehicles in a waiver decision; (2) extends the period allowed for consideration of the waiver request application from 180 days to 270 days; and, (3) deletes a provision that resulted in a waiver request becoming effective by operation of law if the Administrator made no decision on the application within 180 days of receipt of the application.[12]

B. Growth Energy Application and Review Process

On March 6, 2009, Growth Energy and 54 ethanol manufacturers (hereafter "Growth Energy") submitted an application to the U.S. Environmental Protection Agency (EPA) for a waiver of the substantially similar prohibition. This application seeks a waiver

[12] As noted previously, the Energy Independence and Security Act of 2007 also substantially increased the mandated renewable fuel requirements of the Renewable Fuels Standard Program.

for gasoline containing up to 15 vol% ethanol. On April 21, 2009, EPA published notice of the receipt of the application, and EPA requested public comment on all aspects of the waiver application for assisting the Administrator in determining whether the statutory basis for granting the waiver request for E15 has been met.[13] EPA originally provided a 30-day period for the public to respond. The deadline for public comment was May 21, 2009.

After multiple requests for additional time to comment, EPA agreed that additional time for comments was appropriate and that an extension of the comment period would aid in providing these stakeholders and others an adequate amount of time to respond to the complex legal and technical issues that result from possibly allowing E15 to be sold commercially. Accordingly, on May 20, 2009, EPA published a **Federal Register** notice extending the public comment period for the E15 waiver application until July 20, 2009.[14] For EPA's response to more recent requests for an additional comment period, see section IX.

The Agency received approximately 78,000 comments on the waiver application. The overwhelming majority of these comments were brief comments from individuals indicating either general support for or opposition to the E15 waiver application. The Agency also received a large number of comments from a variety of organizations which substantively addressed the questions which EPA posed in the **Federal Register** notice announcing receipt of the

---

[13] *See* 74 FR 18228 (April 21, 2009).

[14] *See* 74 FR 23704 (May 20, 2009).

application. These comments are summarized and addressed below.

In addition to the information submitted by Growth Energy and commenters, the Department of Energy (DOE) has been performing, and continues to perform, testing on a variety of motor vehicles focused on the effect E15 might have on motor vehicles after long-term use of E15 ("DOE Catalyst Study"). This testing is a significant source of information on the effects of E15 on the durability of motor vehicles' emissions control systems, a key technical issue to be addressed in EPA's waiver review. This kind of testing requires thousands of miles of mileage accumulation (or its equivalent using a test cell), and the collection of such data requires a significant amount of time to complete.

Coordinating with EPA and stakeholders, DOE expedited the durability testing, first focusing on newer motor vehicles. Realizing that it would take a significant amount of time (months) to finish collecting and evaluating the durability data, EPA notified Growth Energy in a letter on November 30, 2009, that it was not issuing a decision on the waiver at that time but instead planned to issue a decision at a later date based on the need to assess the critical data being generated by the DOE catalyst durability test program.

The DOE Catalyst Study is comprehensive. A total of 82 vehicles are expected to undergo full useful life testing. Motor vehicles are accumulating mileage under an accelerated protocol, which generally results in each motor vehicle being tested over 6–9 months. DOE has completed the first phase of this testing which focused on light-duty motor vehicles

certified to Federal Tier 2 emissions standards. The analysis and evaluation of not only this durability data, but all of the data relevant to the Growth Energy application, as well as EPA's partial waiver decision, is discussed and explained below. DOE should complete testing on vehicles certified to National Low Emission Vehicle (NLEV) and Tier 1 Federal emission standards by the end of November.

Various parties have also suggested allowances for the use of E12 (gasoline- ethanol blended fuel that contains 12 vol% ethanol) for all gasoline-powered vehicles and engines. The issue of E12 is also discussed separately below in Section VIII.

C. Today's Notice of Proposed Rulemaking (NPRM) on Misfueling Mitigation Measures

As noted above, today's partial waiver decision places several conditions on fuel and fuel additive manufacturers to mitigate the use of E15 in nonroad products, highway and off-highway motorcycles, heavy-duty gasoline engines and vehicles, and motor vehicles older than MY2007.

In a separate notice, we are today proposing regulatory provisions that parallel many of the conditions placed on the E15 partial waiver. Specifically, we are proposing a prohibition on the use of gasoline containing greater than 10 vol% ethanol in MY2000 and older non-flex fueled light-duty motor vehicles, heavy-duty gasoline engines and vehicles, highway and off-highway motorcycles, and all nonroad products, based on findings under both sections 211(c)(1)(A) and (B) of the CAA. The prohibition is necessary based on the potential for increased emissions resulting from the use of E15. In order to facilitate the entry of E15 into commerce for use in

MY2007 and newer motor vehicles, while protecting vehicles and engines not approved for use of E15, this rulemaking proposes fuel pump labeling provisions to mitigate the misfueling of motor vehicles and other engines, vehicles and equipment prohibited from using a motor vehicle gasoline containing ethanol in levels higher than E10. We are also proposing additional requirements for fuels that contain greater than 10 vol% ethanol and no more than 15 vol% ethanol, including the proper documentation of ethanol content on product transfer documents and requirements for a national survey to ensure the proper placement of E15 labels and the proper placement of gasoline-ethanol blends in the appropriate gasoline storage tanks; these provisions should help support the effectiveness of a labeling program.

[CONTENT OMITTED]

IV. Waiver Submissions and Analysis of Light-Duty Motor Vehicle Issues

[CONTENT OMITTED]

A. MY2007 and Newer Light-Duty Motor Vehicles

[CONTENT OMITTED]

1. Exhaust Emissions—Long-Term Durability

[CONTENT OMITTED]

a. Growth Energy's Submission

[CONTENT OMITTED]

b. Public Comment Summary

Several commenters responded that the RIT Study has limitations and does not alleviate concerns about the long-term emissions impacts of using E15 in motor vehicles. The Manufacturers of Emissions Controls Association (MECA) argues that emission control-related concerns regarding the use of E15 include the potential for accelerated thermal deactivation of three-way catalysts equipped on existing light-duty motor vehicles or nonroad engines, due to higher exhaust temperatures that have been observed on engines fueled with mid-level ethanol blends in comparison to E0 and E10. MECA argues further that the thermal durability of three-way catalyst formulations is a function of time, catalyst temperature, and gas composition; extended catalyst exposure to higher exhaust temperatures, especially in the presence of oxygen-rich exhaust conditions that can be created through the use of E15, can accelerate catalyst thermal deactivation mechanisms (e.g., sintering of active precious metal sites, sintering of oxygen storage materials, and migration of active materials into inert support materials). [26]

---

[26] "Statement of the Manufacturers of Emission Controls Association on the Waiver Request Received by the U.S. Environmental Protection Agency to Increase the Ethanol Con-

Many commenters point out that Growth Energy submitted and cited only a summary of the RIT Study. The summary, as these commenters note, omits key details necessary to evaluate the conclusions that Growth Energy draws from the RIT Study. For example, commenters noted that the summary did not specify the make, model and year of the motor vehicles tested, making it impossible to determine the representativeness of RIT's motor vehicle test fleet. Additionally, they added that no actual data were included in the summary for commenters and the Agency to conduct independent analyses of RIT's test results. Furthermore, no detailed descriptions outlining the fuel properties of both test fuels (E0 and E20) were included in the summary. Even through Growth Energy provided an updated summary of the RIT Study in its comments, this updated summary still omitted important details necessary for commenters and the Agency to conduct an independent analysis.

Auto manufacturers, refiners, and several others similarly noted that higher exhaust temperatures could cause increased deterioration of catalysts over time. These commenters assert that this deterioration may adversely affect a motor vehicle's ability to meet emissions standards, particularly after significant mileage accumulation.

Commenters noted that a recently released Coordinating Research Council (CRC) Report E-87-1 ("the CRC Screening Study" or "E-87-1") is the first phase of another test program developed to look at the ef-

---

tent of Gasoline up to 15%," EPA Docket #EPA-HQ-OAR-2009-0211-2441.1.

fects of mid-level gasoline-ethanol blends on U.S. motor vehicles.[27] The purpose of the study was to identify motor vehicles which used learned fuel trims to correct open-loop air-to-fuel (A/F) ratios since this may gauge the risk of the catalyst to thermal degradation.[28] This study is the first phase of a two-phase study evaluating the effects of mid-level gasoline-ethanol blends on emission control systems. The test program identified and acquired a fleet of 25 test motor vehicles with 12 of those motor vehicles manufactured after 2000. The study collected vehicle speed, oxygen sensor A/F ratio, and catalyst temperature data on four fuels (E0, E10, E15, and E20). Results compared the three gasoline-ethanol blends with E0. The study concluded that a large number of vehicles (12 of the 25 tested) failed to apply long-term fuel trim to correct for increasing ethanol levels when operating in open-loop control.

Commenters also pointed out that the CRC Screening Study showed increased exhaust temperatures in motor vehicles that failed to apply long-term learned fuel trim when operating open loop at wide open throttle using E15 and E20. This constituted seven of the sixteen vehicles tested, and the average increase was 30 degrees Celsius in these motor vehicles.

---

[27] Mid-level Ethanol Blends Catalyst Durability Study Screening (CRC Report: E- 87-1), June 2009 ("CRC Screening Study"), EPA Docket # EPAHQ- OAR-2009-0211-13970. Available at: http://www.crcao.com/reports/recentstudies2009/E-87-1/E-87 1¨Final¨Report¨07—06—2009.pdf.

[28] *See* section IV.A.1.c. for a detailed discussion of these terms.

Several comments refer to a series of studies conducted by Orbital Engine Company for Environment Australia to evaluate impacts E20 would have if introduced in Australia ("the Orbital Study"). The Orbital Study evaluated emissions performance on total hydrocarbon, CO, NOx and aldehydes, materials compatibility issues, and driveability of E20 compared to E0 with a test fleet of five paired late model Australian motor vehicles. The Orbital Study completed emissions testing over 80,000 kilometers (about 50,000 miles). The study notes that there were substantial increases in regulated pollutants for motor vehicles that used E20 when compared with vehicles that used E0 after the accumulation of 80,000 kilometers. The study's authors further point out that one motor vehicle operating on E20 exceeded the Australian NOX emissions standard.[29] The Orbital authors also examined catalyst efficiency changes as a possible cause of the changes in emissions as a result of aging the motor vehicles on E20. The Orbital authors conclude that the exhaust emissions increases occurred due to catalyst degradation which they attribute to the increase in exhaust temperature from E20 use during particular modes of operation. They continue by noting that the two motor vehicles that experienced dramatic emissions increases with E20 after aging were motor vehicle models that failed to adjust to the higher oxygen levels found in E20.

---

[29] After reviewing the emissions results presented in the Orbital Study, we believe that these motor vehicles' certified emissions standards are comparable to the Tier 1 (1994 to 1999) motor vehicle exhaust emissions standards in the United States.

The Alliance of Automobile Manufacturers ("the Alliance") reasons that the Orbital Study, the CRC Screening Study, and the DOE Pilot Study[30] suggest that allowing the use of E15 in motor vehicles could cause a substantial number of motor vehicles to fail emissions standards because of increased catalyst deterioration over the motor vehicles' full useful life, especially in so-called "legacy vehicles" which constitute a bulk of the American motor vehicle fleet. The Alliance asserts that this uncertainty of the long-term effects of E15 on catalysts durability would require motor vehicle testing over the full useful life to address these concerns. The Alliance for a Safe Alternative Fuels Environment ("AllSAFE") concluded that legally "when the relevant effects can include accelerated catalyst deterioration, 'back to back' testing to determine so-called 'immediate' emissions impacts is not sufficient."[31]

---

[30] In October 2008, DOE released a report titled Effects of Intermediate Ethanol Blends on Legacy Vehicles and Small Non-road Engines, Report 1. DOE later published an update to that report, which included all of the original study plus additional vehicles. For the purposes of this decision document, we refer to the updated study, Effects of Intermediate Ethanol Blends on Legacy Vehicles and Small Non-road Engines, Report 1—Updated, National Renewable Energy Laboratory, February 2009, as the "DOE Pilot Study". EPA Docket #EPA-HQ-OAR-2005-0161-2880.

[31] "Exhibit B, Supplemental Statutory Appendix To the Comments of the Alliance for a Safe Alternative Fuels Environment On the Request for Waiver of the Prohibition in Section 211(f)(1) of the Clean Air Act

Noticed for Comment at 74 FR 18,228 (April 21, 2009) ", submitted by AllSAFE, EPA Docket #EPA-HQ-OAR-2009-

Growth Energy submitted two responses to the Orbital Study. First, Growth Energy commented that the motor vehicles tested in the Orbital Study were designed for Australian emission standards and are not representative of motor vehicles found in the US. Second, since much of the research Orbital relied on was conducted in the 1980s and early 1990s, Growth Energy points out that the "U.S. fleet has been redesigned significantly since the mid-1980s to accommodate different fuel blends and meet the world's most stringent emission regulations."[32]

Specifically addressing the issue of higher catalyst temperatures, Growth Energy, ACE, and others responded in their respective comments that higher catalyst temperatures are not necessarily harmful to the catalysts.[33] They point out that the catalyst temperature increases in the DOE Pilot Study were relatively small and well within normal operating temperatures. These commenters also note that the temperatures only occurred in certain motor vehicles and only when those motor vehicles were operated in the rarely used wide open throttle mode. Growth Energy points out that for the seven motor vehicles that adjusted for the extra oxygen from the increased ethanol blends, catalyst temperatures were cooler on average.

0211-2559.2.

[32] "ATTACHMENT A: Responses to Anecdotes and Unfounded Claims Regarding E-15," submitted by Growth Energy, EPA Docket #EPA-HQ-OAR-2009-0211-2721.2.

[33] In fact, ACE argues that these increased catalyst temperatures may be responsible for the average decreases in NO—T2X emissions found in the DOE Study and RIT Study. See ACE's Comment, 8.

c. EPA Response Regarding the Need for Long-Term Exhaust Emissions (Durability) Testing

i. General Long-Term Exhaust Emissions (Durability) Concerns

Ethanol impacts motor vehicles in two primary ways. First, as discussed below, ethanol enleans the A/F ratio (increases the proportion of oxygen relative to hydrocarbons) which can lead to increased exhaust gas temperatures and potentially increase incremental deterioration of emission control hardware and performance over time, possibly causing catalyst failure. Second, ethanol can cause materials compatibility issues, which may lead to other component failures (this will be discussed further in sections IV.A.3 and IV.A.4 below). Ultimately, either of these impacts may lead to emission increases.

Due to the increased oxygen content of E15 relative to E10, motor vehicles operated on E15 will likely run even leaner than those operated on E10 depending on the vehicle technology and operating conditions. It is also relevant to note that all motor vehicles are emissions and durability tested for exhaust emissions certification purposes using an E0 fuel; therefore, this effect of changing from E10 to E15 will not be present during certification and compliance testing. Enleaned combustion leads to an increase in the temperature of the exhaust gases. This increase in exhaust gas temperatures has the potential to raise the temperatures of various exhaust system components (e.g., exhaust valves, exhaust manifolds, catalysts, and oxygen sensors) beyond their design limits. However, based on past experience, the

most sensitive component is likely the catalyst, particularly in older motor vehicles with early catalyst technology. Catalyst durability is highly dependent on temperature, time, and feed gas composition. Catalyst temperatures must be controlled and catalyst deterioration minimized during all motor vehicle operation modes for the catalyst to maintain high conversion efficiency over the motor vehicle's full useful life (FUL). This is particularly important during high-load operation of a motor vehicle where the highest exhaust gas temperatures are typically encountered and the risk for catalyst deterioration is the greatest. Catalysts that exceed temperature thresholds will deteriorate at rates higher than expected, compromising the motor vehicles' ability to meet the required emission standards over their FUL. Extended catalyst exposure to higher exhaust temperatures can accelerate catalyst thermal deactivation mechanisms (e.g., sintering of active precious metal sites, sintering of oxygen storage materials, and migration of active materials into inert support materials). While this damage can occur at a highly accelerated rate with a sudden change in temperature (e.g., with a misfire allowing raw fuel to reach the catalyst), it is more likely to occur over time from elevated exhaust temperatures as may be experienced with frequent or even occasional exposure to E15. This deterioration may adversely affect a motor vehicle's ability to meet emissions standards, particularly after significant mileage accumulation.

Some motor vehicles may be designed in ways that manage catalyst temperatures by compensating for the oxygen in the fuel under all operating conditions, including high loads. This is achieved by using a closed-loop fuel system that measures the A/F ratio

and makes the appropriate corrections to maintain the A/F ratio in the very tight band of operation around stoichiometry necessary for optimum catalyst performance and reductions in HC, CO, and NOX emissions. The corrections can be applied to other areas of operation to achieve the desired A/F ratio. The part of the closed-loop fuel system that is responsible for the correction to the A/F ratio is referred to as "fuel trim." The fuel trim adds or removes fuel to the engine in order to maintain the required A/F ratio. If the measured A/F ratio has insufficient oxygen or is "rich," compared to what the engine needs, the fuel trim will instruct the fuel injectors to inject less fuel, making the A/F ratio "leaner." The opposite is true if the measured A/F ratio has too much oxygen and needs to inject more fuel for a "richer" A/F ratio. The fuel trim is generally comprised of two major parts, short-term fuel trim and long-term or learned or adaptive fuel trim. Learned or adaptive fuel trim can also be applied to open-loop operation such as high-load or wideopen throttle to alleviate the catalyst temperature increases caused by operating on E15. However this practice has not been consistently employed by all manufacturers

ii. Response to Growth Energy's First Argument

In its first argument Growth Energy asserted that long-term exhaust emissions testing ("durability testing") is not required for E15 because EPA has waived durability testing for oxygenates in previous waiver decisions. The Agency believes that Growth Energy's waiver request application is different in substantial ways from previous oxygenate waiver applications that EPA has reviewed. Previous oxygenate waivers

have, at most, resulted in increased fuel oxygen levels of up to around 2.7% by weight oxygen. E15, for the first time, would add significantly more oxygen to the fuel, up to around 5.5% by weight oxygen depending on the density of the gasoline to which ethanol is added. This increase in oxygen content is double the current oxygen content limit that EPA interprets to be substantially similar to motor vehicle gasoline used in the certification of motor vehicles.[34] Additionally, with the exception of the original E10 waiver, which was not granted through an EPA decision but through the operation of law,[35] and the Tertiary-butyl Alcohol waiver, which leads to oxygen content of about 1.6 percent, EPA has placed a condition on all other gasoline-alcohol waivers requiring a corrosion inhibitor to deal with the aggressive nature of these fuels.

In addition to this very large increase in oxygen content compared to the waivers granted by EPA over 20 years ago, the emissions standards that motor vehicles must achieve have become much more stringent over time. As a result, emissions control systems have also changed significantly over time. The emissions controls systems of vehicles over the last 20 years have progressively become more dependent on the ability to control the deterioration of the emissions control system, especially the catalyst, to achieve compliance with the emissions standards over the full useful life of the motor vehicle. Of particular importance is the ability of emissions control systems over time to limit or control long-term dete-

---

[34] *See* 73 FR 22277 (April 25, 2008).

[35] *See* 44 FR 20777 (April 6, 1979).

rioration by accounting for the oxygen level of the fuel. The oxygen content levels at issue in this waiver application raise serious concerns about long-term durability. This concern is supported by information in several studies.

For both of these reasons, EPA rejects Growth Energy's claim that long-term exhaust emissions (durability) testing is not required for the E15 waiver request and that it would be arbitrary or capricious for EPA to require durability testing for this waiver.

iii. Response to Growth Energy's Second Argument

Growth Energy in its second argument concluded that E15 does not require long-term exhaust emissions (durability) test data, because, as they state, EPA may accept reasonable theoretical judgments as to the emission effects of a fuel as an alternative to the direct testing of motor vehicles. However, Growth Energy has not presented a reasonable and valid engineering theory to demonstrate that E15 will not detrimentally impact the durability of emissions control systems such that engines and vehicles can still meet their emissions standards while using E15. They point to fuel volatility specification, limited durability emissions testing, data regarding materials compatibility and driveability, as well as the collection of studies supplied in the application, coupled with 30 years of experience with using E10, as providing a rational basis for a theory that E15 would not cause long-term deterioration of the emissions control systems of motor vehicles. However, this is not an engineering theory or an engineering analysis. Growth Energy has not analyzed the design of emissions control systems and their changes over time, as emissions standards have increasingly be-

come more stringent. Nor has Growth Energy explained from an engineering perspective why in theory the oxygen levels found in E15 should not lead to durability problems for the emissions control system when used over time. Instead, Growth Energy points to the same information as both the source of its theory as well as the data used to confirm its theory. This highlights the circular nature of Growth Energy's argument, as well as the absence of an engineering analysis that identifies and explains any theory Growth Energy relies upon.

Absent such a theory, one would perform the durability testing and draw conclusions from such testing about the impact of E15 on long-term durability. In essence, Growth Energy is suggesting that the data and testing it presents provides such an evidentiary basis and is as credible as data gathered from actual long-term durability testing for drawing such conclusions. Instead of presenting a reasoned engineering theory and data to confirm it, they are presenting what amounts to an alternative evidentiary basis to long-term durability testing. However, the information that Growth Energy relies on is not adequate to provide such a basis.

For example, the RIT Study that Growth Energy cites does not support the conclusions that Growth Energy draws from this test program. Specifically, Growth Energy argues that because the RIT Study had run 10 motor vehicles over 75,000 miles without any serious issues, a reasonable theory concerning E15's effects on long-term durability may be inferred. However, 10 motor vehicles run over 75,000 miles on E20 is only an average of 7,500 miles per motor vehicle. This is substantially lower than the

100,000/120,000 full useful life of the motor vehicles in the test program. Similarly, Growth Energy argues that the expanded RIT Study ran 400 motor vehicles over 1.5 million combined miles without significant issues. However, 400 motor vehicles run over 1.5 million miles is an average of 3,750 miles per motor vehicle. Additionally, Growth Energy suggests that RIT found decreases in the emissions of regulated pollutants in RIT's 400-vehicle driveability study, but no actual emissions testing on those motor vehicles was performed. In the updated RIT summary that Growth Energy submitted during the comment period, RIT had not conducted any additional motor vehicle emissions testing since the earlier summary.

Although the initial emissions testing conducted in 2008 may suggest decreases in regulated pollutants, it does not address concerns that increased ethanol levels in gasoline may lead to increased exhaust temperatures, increased catalyst deterioration, and increased emissions over time. Since the RIT study only performed emissions testing on 10 of the vehicles (4 of which were Ford F250 trucks), and the mileage accumulated on E20 for each vehicle was far less than the 120,000 mile FUL, it is not possible to draw adequate conclusions concerning long-term emissions from the RIT Study even after the completion of the test program.

The Agency finds that none of the other studies or information cited by Growth Energy specifically addresses the concern with the effect of increased exhaust temperatures due to increased ethanol levels and how that will impact the motor vehicles' ability to meet their emissions standards over their useful life. The studies and material may provide infor-

mation relative to other aspects of ethanol impacts but fall short of providing any substantive information on the long-term effects of midlevel gasoline-ethanol blends on emissions control systems. Nor do any of the studies that Growth Energy cites provide sufficient information to lead the Agency to believe that there will not be long-term durability concerns. Growth Energy did not provide any data or analysis of warranty or repair information from in-use experience with E10 vs. E0 with which to assess what the impact has been over the last 30 years from the use of E10 in the in-use fleet, nor any information showing how the results of such an analysis would change with the use of E15. Therefore, we do not agree with Growth Energy that durability testing is not required.

The Agency concludes that the studies and other information cited in Growth Energy's waiver request application, and its public comments, do not demonstrate that E15 is not likely to have adverse impacts on the long-term exhaust emissions (durability) of the emissions control system over the full useful life of motor vehicles. The DOE Pilot Study, the CRC Screening Study, the Orbital Study, comments from the automobile manufacturers, and our engineering judgment, as discussed below, all indicate that legitimate concerns exist that E15 could accelerate the deterioration of the catalysts in a sizeable portion of the national fleet, leading to increased emissions.

Therefore, EPA finds that the limited durability testing and other information relied upon by Growth Energy is not adequate by itself to determine the long-term durability impact of E15 on exhaust emissions control systems.

d. Durability Studies and EPA Analysis

[CONTENT OMITTED]

i. DOE Catalyst Study Overview

The Intermediate Ethanol Blends Emissions Controls Durability Test Program ("DOE Catalyst Study") was established in 2008, following enactment of the Energy Independence and Security Act of 2007, to investigate the potential impacts of gasoline-ethanol blend levels above 10% on the durability of vehicle emissions control systems. The program was subcontracted to Southwest Research Institute (SwRI), Transportation Research Center (TRC) and Environmental Testing Corporation (ETC).

[CONTENT OMITTED]

vii. Summary and Conclusions of the Final Results of the DOE Catalyst Study

[CONTENT OMITTED]

Table IV.A-3—E15 FUL Results Compared to Tier 2 Standards[40]

[40] Our assessment of motor vehicles that exceeded emissions standards at FUL mileage accumulation is that the exceedances were not attributable to the fuel used.

Year	Model	LFT@WOT	NOx	NMOG	CO
2007	Accord	N	Pass	Pass	Pass
2006	Silverado	Y	Pass	Pass	Pass
2008	Altima	N	Pass	Pass	Pass
2008	Taurus	Y	Pass	Pass	Pass
2007	Caravan	N	Pass	Pass	Pass
2006	Cobalt	N	Pass	Pass	Pass
2007	Caliber	N	Pass	Pass	Pass
2009	Civic	N	Pass	Pass	Pass
2009	Explorer	Y	Pass	Pass	Pass
2009	Corolla	Y	Pass	Pass	Pass
2009	Liberty	N	Pass	Pass	Pass
2005	Tundra	Y	Pass	Pass	Pass
2006	Implala	Y	Pass	Pass	Pass
2005	F150	Y	Pass	Pass	Pass
2006	Quest	N	Fail	Pass	Pass
2009	Outlook	Y	Pass	Pass	Pass
2009	Camry	Y	Pass	Pass	Pass
2009	Focus	Y	Fail	Pass	Pass
2009	Odyssey	N	Pass	Pass	Pass
	Total Fails		2	0	0

[CONTENT OMITTED]

2. Exhaust Emissions – Immediate Effects for MY2007 and Newer Light- Duty Motor Vehicles

[CONTENT OMITTED]

a. Growth Energy's Submission

[CONTENT OMITTED]

b. Public Comment Summary

The Alliance of Automobile Manufacturers ("The Alliance") and several others commented that EPA has repeatedly outlined in past waiver decisions and public presentations important methodological considerations necessary to conduct a rigorous test program which would provide data sufficient to satisfy waiver criteria.[47] Comments from the Alliance describe the data requirements EPA has required in the past, specifically noting that those test programs required the following: (1) Use representative test fleets of motor vehicles available in the market; (2) conduct back-to-back motor vehicle pair testing to control for variability; (3) compare test fuel results with a baseline certification fuel; (4) use Federal certification test procedures (FTP) for emissions testing; (5) evaluate emissions effects over the full useful life

---

[47] See Alliance of Automobile Manufacturers Comments, National Petrochemical and Refiners Association, the American Petroleum Institute's Comments, and the Alliance for the Safe Alternative Fuels Environment comments in EPA Docket #EPA-HQ-OAR-2009-0211.

for durability testing through real-world aging; and (6) perform statistical analyses to provide defensible results. The Alliance went on in their comments to highlight deficiencies in one or more of these data requirements in each of the studies cited by Growth Energy.

Additionally, the Alliance and others argue that none of the studies submitted by Growth Energy used nationally "representative" test fleets. The Alliance points out that the American automobile fleet takes about 20 years to turn over, and that a well-executed study should have a test fleet that is proportionally similar to the model years that comprise the national fleet. The Alliance argues that a bulk of the emissions data cited in Growth Energy's waiver request focus on newer (i.e., Tier 2) motor vehicles and do not adequately represent the national motor vehicle fleet and that these older motor vehicles may be more sensitive to the effects of higher gasoline-ethanol blends and constitute a greater portion of the number of motor vehicles currently in use. Many comments recommend that the Agency deny Growth Energy's request based on the potentially adverse effects of E15 on older motor vehicles.

Several commenters, including the automobile manufacturers, petroleum refiners, environmental organizations and State agencies, noted the expected linear relationship between ethanol content in gasoline-ethanol blends and increased NOX emissions. These commenters pointed out that the EPA Predictive Models, MOVES model and the MOBILE6.2 model all predicted increased NOX emissions as a gasoline-ethanol blend increases the ethanol content. These models are used for air quality modeling pur-

poses for compliance with State and Federal air quality standards and are based on comprehensive motor vehicle testing spanning decades. These commenters argued further that these increases in NOX may cause a sizable portion of the motor vehicle fleet to exceed emissions standards, especially if a motor vehicle was close to the emissions standard.

c. EPA Analysis

The Agency agrees with commenters that there are several limitations of the studies cited by Growth Energy and/or the analyses they performed, which undermine their conclusions. The ACE study cited by Growth Energy does not provide useful information to assess the emissions performance of motor vehicles for purposes of this waiver decision since it tested three non-flex fuel Tier 2 motor vehicles primarily under high-speed and high-load conditions, atypical of most inuse motor vehicle operation and not representative of motor vehicle certification conditions. The study likely shows that the high heat of vaporization and high octane of ethanol can enhance vehicle performance under wide-open throttle conditions and high loads, but the Agency believes that it is not relevant for evaluating emissions under normal operating conditions as observed on properly loaded motor vehicles tested on certification test cycles generally required for a waiver emission impacts demonstration.

The RIT Study cited by Growth Energy was an interim report of ongoing work in which E0 and E20 fuels were tested in 10 1998-2004 model year motor vehicles from the Monroe County Fleet Center, none of which were designed to comply with Tier 2 emis-

sion standards. The emissions testing performed at the time of Growth Energy's application failed to properly measure emissions related to the ethanol (i.e., alcohols and aldehydes) which contribute to the NMOG emissions. Furthermore, the testing schedule did not perform back-to-back testing of the different fuels at common motor vehicle mileage intervals, thus confounding fuel and normal deterioration effects. As discussed below, we believe these shortcomings were subsequently corrected in later testing through the support of the NREL, but the data cited by Growth Energy could not be used to quantify the immediate emissions impacts of E15.

The MCAR Study cited by Growth Energy tested 15 motor vehicles of various model years from 1985 to 1998. However, the emissions were measured over only a hot portion of the certification cycle and the individual test results needed for analysis were never submitted or made available to the Agency. Therefore, it could not be used to compare the emissions performance of the motor vehicles to the emissions standards. Furthermore, since only E10 and E30 were tested, it cannot be used to quantify the immediate emission impacts relative to the official E0 certification fuel.

Only the DOE Pilot Study cited by Growth Energy provides useful information for assessing the immediate exhaust emission impacts of E15. It measured emissions from 16 vehicles, including seven Tier 2 compliant motor vehicles, on E0, E10, E15, and E20 splash blends over the LA92 drive cycle. However, even it is of limited usefulness in drawing conclusions regarding the impact of E15 across the large in-use motor vehicle fleet due to the limited size and

nature of the test program (fleet makeup, test fuels). The DOE Pilot Study was not designed to quantify the emissions impact across the fleet but instead to probe a limited sample of high sales volume motor vehicles certified to different emission standards for any immediate emission problems. By itself, it is not a basis for drawing any definitive conclusions with respect to E15 emissions performance.

Thus, each of the individual studies is of limited value in evaluating the immediate emissions impact of E15 across the various groups of motor vehicles at issue in this partial waiver decision. As a group, these studies are no stronger as they do not fill the gaps in each of the various studies. Therefore, the Agency does not believe that the studies submitted by Growth Energy adequately support the conclusions that Growth Energy drew from them regarding the immediate exhaust emission impacts from using E15. At the same time, the Agency believes that there is sufficient data and information available to demonstrate that the immediate emissions impact of E15 follows the same pattern as E10 in that there will be a decrease in NMOG (as well as NMHC and total HC) and CO emissions and an increase in NOX emissions. While the magnitude of the NOX emissions increase is greater with E15 it is still not enough to cause at least Tier 2 compliant motor vehicles to violate their NOX emissions standard.

There is a long history of test programs that have been carried out on light-duty motor vehicles and trucks that have quantified the emission impacts of blending ethanol up to 10 vol% into gasoline. These test programs, dating back to the earliest days of gasoline-ethanol blends, have found that the oxygen

content of ethanol enleans the A/F ratio in motor vehicles during open-loop operation, causing a decrease in HC and CO emissions, but also results in a corresponding increase in NOX emissions. These test programs have also shown that during normal closed-loop operation the combustion characteristics of ethanol contribute to small increases in NOX emissions. There are other factors that can play into the emission impacts, such as other changes to gasoline that occur or are made when ethanol is added, the high heat of vaporization and high octane of ethanol, and the design and control algorithms of the motor vehicle. However, similar emission trends with ethanol have been seen consistently in most carefully controlled and properly conducted studies. These studies have been used to develop emission models, such as the EPA Predictive Models[48] incorporated into the Agency's MOVES model,[49] that have been thoroughly peer reviewed. The result is that for a typical E10 blend of gasoline, exhaust NMHC emissions have been found to decrease by about 5%, and NOX emissions to increase by about 6%, relative to E0.[50]

---

[48] A detailed description of the development of the EPA Predictive Models is available in a Technical Support Document: "Analysis of California's Request for Waiver of the Reformulated Gasoline Oxygen Content Requirement for California Covered Areas", EPA420-R-01-016, June 2001.

[49] The Agency's MOVES model has undergone extensive peer review and testing, and incorporates the EPA Predictive Models.

[50] These effects are based on the EPA Predictive Models and are generally consistent with conclusions of CRC E-74b report (e.g., Figure ES-2). Fuels properties evaluated were based on market averages and were as follows: E0 had aromatics content of 29.5 vol%, a T50 of 215 °F, a T90 of 325 °F,

While the magnitude of impact may vary by a few percent depending on the motor vehicle technology and how other fuel properties change when ethanol is blended into gasoline, the relative magnitude and direction of the impacts remains consistent for typical fuels.[51]

While there is a great deal known about the immediate impacts of gasoline-ethanol blends on emissions from the past studies and modeling, it is all based on pre-Tier 2 motor vehicles and only ethanol blends up to E10. The issue for the waiver is whether the impacts of E15 would be significantly different in comparison to E0 and cause motor vehicles to violate their emission standards over their full useful life, and whether there is sufficient information to support such a conclusion for Tier 2 motor vehicles as well as other motor vehicles. While the information provided by Growth Energy was of limited value, we believe that the additional information that is now available can be used to assess the immediate emissions impacts on Tier 2 motor vehicles sufficiently to respond to the E15 waiver request.

CRC recently completed a test program (E-74b) that evaluated the emissions performance of E10 and E20 compared with E0 ("CRC Emissions Study").[52]

---

and an RVP of 8.9 psi and E10 had aromatics content of 24.9 vol%, a T50 of 202 °F, T90 of 325 °F, and an RVP of 8.9 psi. Other parameters not mentioned here were assumed to be held constant between the blends.

[51] Results based on data mostly from vehicle models that predated the Tier 2 emission standards, so several recent test programs have been focused on Tier 2 vehicles that will soon make up the majority of the in-use fleet.

[52] CRC Report No. E-74b, "Effects of Vapor Pressure, Ox-

The study tested 15 MY1994-2006 motor vehicles on E0, E10, and E20. The motor vehicles represented a cross-section of several motor vehicle technologies and emissions compliance levels, and included three Tier 1, five NLEV, and seven Tier 2 motor vehicles. The test fuels were match-blended to yield appropriate test program volatility goals while attempting to maintain other desired property targets, such as aromatics content and distillation behavior. The study's authors attempted to evaluate increased oxygen levels through the blending of ethanol in a variety of gasolines with fuel parameters representative of those found in the real world. Emissions performance testing was completed using the FTP at 75 °F and 50 °F. The study found a statistically significant positive linear relationship between the amount of ethanol blended into gasoline and NOX emissions when controlling other fuel parameters. In other words, as the level of ethanol blended into gasoline increased, the amount of NOX emissions also increased, and this effect remained relatively consistent across the motor vehicle technologies tested. Specifically, the study found that NOX emissions increased with E10 by about 9% relative to E0, consistent with the projection from the EPA Predictive Models when the study's fuel properties are input. NOX emissions for E20 increased by about 19% relative to E0. The test program also found that HC emissions declined from 8% to 16% over this same range. While not linear, a relationship of decreasing emissions with increasing ethanol content was also observed for CO emissions. Presumably the impacts of E15, had they tested it,

---

ygen Content, and Temperature on CO Exhaust Emissions", May 2009, EPA Docket #EPA-HQ-OAR-2009-0211-13980.

would have fallen somewhere between those of E10 and E20.

The DOE Pilot Study cited by Growth Energy tested 16 different MY1999-2007 light-duty motor vehicles on E0, E10, E15 and E20. These motor vehicles included three Tier 1, six NLEV, and seven Tier 2 motor vehicles of varying odometer mileage, generally proportional to age (i.e., older motor vehicles had higher miles). Test fuels were splash blended with the certification E0 fuel allowing the other fuel properties (aromatic content, RVP, etc.) to change with ethanol dilution. The motor vehicles were tested over the LA92 drive cycle (also known as the Unified Cycle) which is considered to be representative of real-world acceleration rates and speeds.[53] The study found small reductions in NOX and NMOG emissions across the different fuels that were not statistically significant. While these findings do not show the NOX emissions increase and NMOG and CO emissions decrease that might be anticipated, this may have been due to the limited scope of the program, the test cycle, and other changes in the fuel properties known to directly impact emissions. Nonetheless, the results do not show that the immediate NOX emissions impacts of E15 to be of concern.

During the course of the DOE Catalyst Study (see Section IV.A.1.d), some back-to-back tests of E15 and

---

[53] The Alliance commented that only the FTP test cycle should be used for emission impacts. While the LA92 cannot be used for confirmation of vehicle emissions compliance, it is used regularly in engineering and research work, including by manufacturers to measure emission impacts and confirm OBD monitor operation and therefore the Agency believes it remains a valid cycle for emissions analysis.

E0 fuels were performed. This portion of the testing was not designed to be able to quantify the immediate emission impacts with any turned out to be very large, and in fact it did not show any statistically significant changes in NOX or NMOG emissions for E15 compared to E0. At the same time, the data is useful in supporting the conclusion that the immediate emission impacts of E15 compared to E0 are not large, and likely in the same range as other studies have shown.

Finally, as mentioned above, RIT performed additional testing subsequent to the results Growth Energy submitted as part of its waiver request application. These later results were presented at a meeting of the Mid-Level Ethanol Blends Research Coordination Group on May 5, 2010.[54] These results showed a 13.9% reduction in HC (NMOG was not measured), 26.9% reduction in CO, and a 6.2% increase in NOX for E20 in comparison to E0. Again, presuming E10 and E15 results would lie within this range, these results are generally consistent with earlier studies and models and continue to confirm that no large increases in NOX emissions are expected.

When EPA assesses the more recent information and data available, we believe it shows both: (1) That Tier 2 motor vehicles exhibit similar immediate emission impact trends (small increases in NOX and small decreases in NMHC and CO) as the data and modeling show for older motor vehicles; and (2) that the immediate emission impacts of E15 continue to show the same trends as E10 with the effects being

---

[54] RIT-CIMS/USDOT E20 Test and Evaluation Program May 2010, EPA Docket #EPA-HQ-OAR-2009-0211-14003.8.

slightly exaggerated due to the higher ethanol content. These four studies (CRC E74b, the DOE Pilot Study, the DOE Catalyst Study, and the RIT Study) are all of limited size and scope and thus show considerable variation in their results, for NOX emissions in particular. However, taken together they suggest that the immediate emission impacts of E10 are likely to be comparable to those that would be projected using the EPA Predictive Models and that a slightly larger NOX emission impact would be expected with E15. Thus, the NOX emissions impact of E15 is likely to be in the range of 5% to 10% based on extrapolation from E10 modeling using the Agency's Predictive Models, and this impact would be expected to be roughly comparable for newer Tier 2 motor vehicles as well as older motor vehicles. For example, a Tier 2 motor vehicle that had NOX emissions levels of 0.030 grams per mile ("g/mi") on E0 would be expected to have NOX emissions levels of 0.033 or less if the same motor vehicle was tested on E15.

Although the overall weight of the available data shows that E15 will cause an increase in NOX emissions, the issue is whether such increases, by themselves or in combination with long-term durability effects, would cause motor vehicles to exceed their certified emissions standards. Given the relatively small magnitude of the immediate NOX emissions increase in relation to the large compliance margins that motor vehicle manufacturers have traditionally built-in to the products they certify,[55] and the lack of

---

[55] A compliance margin is the difference between the emission standard and a vehicle or engine's actual certification emission level. This certification level includes the

any significant increase in NOX emissions deterioration with E15 in comparison to E0 (as discussed in section IV.A.1.a.), it is not anticipated that using E15 will cause or contribute to Tier 2 compliant motor vehicles exceeding their emissions standards.

A survey of official EPA Certification data showed that the average compliance margins for the MY2007 light-duty motor vehicle fleet was over 50% for NOX emissions.[56] This margin is designed into motor vehicles by the manufacturer to account for variations in production vehicles and changes to the motor vehicle during actual field usage. Additionally, data collected from EPA's In-use Verification Program (IUVP) demonstrate large compliance margins for motor vehicles operating in real-world conditions. IUVP is a manufacturer run program in which manufacturers test motor vehicles for emissions levels and submit the results to EPA. IUVP was designed to ensure that light-duty motor vehicles are meeting emissions standards in-use versus only through the certification process. According to the data submitted to EPA, the in-use compliance margins are similar to compliance margins experienced during certification. For IUVP testing for MY2007 as of August 2010, the average compliance margin for light-duty motor vehicles certified to the Tier 2 Bin 5 standard was over 60%.[57]

---

manufacturer's projected rate of deterioration over the useful life of the vehicle.

[56] See 2007 Progress Report: Vehicle and Engine Compliance Activities. These compliance margin values are consistent with the general trend EPA has seen for Tier 2 vehicles.

[57] Tier 2 Bin 5 is the certification standard for a large ma-

In addition, the results of the recently completed DOE Catalyst Study also supports this conclusion for Tier 2 motor vehicles. While the Catalyst Durability Test Program was carried out to assess long-term exhaust emissions (durability) impacts, the immediate emission impacts of ethanol are also captured in the testing. All but two of the Tier 2 motor vehicles tested continued to comply with their exhaust emission standards at FUL despite both the immediate and durability impacts of E15 on emissions. One motor vehicle appeared to exceed the standard not due to E15, but other problems, as it also exceeded the standard on E0. The other motor vehicle model experienced catastrophic issues with the comparable E0 and E20 motor vehicles which were unable to complete the testing. Those motor vehicles that complied with the standard on E15 continued to comply as is typical in IUVP data.[58]

---

jority of vehicles certified in MY2007 (approximately 80%). See 2007 Progress Report: Vehicles and Engine Compliance Activities.

[58] EPA, in collaboration with DOE and CRC has recently completed the testing part of the largest fuels emission research program conducted in the past two decades to assess the impacts of gasoline fuel properties on emissions, including the relationship between ethanol content and higher NO—T2X emissions. E-89 "Comprehensive Gasoline Light-duty Exhaust Fuel Effects Test Program."The test program evaluated emission changes on a motor vehicle test fleet consisting of 15 Tier 2 vehicles (including three FFVs) that was specifically selected to be representative of the makes and models in the national light-duty motor vehicle fleet. The focus was on Tier 2 vehicles to fill a data gap, since existing emission models are based on testing conducted on older technology vehicles. The program used 27 fuels of varying volatility (RVP), aromatic content, distillation range (T50

d. Conclusion

The Agency believes that the data above, coupled with the average compliance margins, are sufficient to show that the immediate exhaust emissions effects by themselves would not cause motor vehicles to exceed their exhaust standards over their useful lives. As discussed earlier, however, whether the fuel or fuel additive will cause motor vehicles to exceed their exhaust emission standards requires consideration of the combined impact of immediate emissions increases and the long-term exhaust emissions (durability) effects.[59]

---

and T90) and ethanol concentrations (E0, E10, E15 and E20), which were blended specially to allow emission impacts to be attributed to one fuel parameter or another. Each vehicle in the test program had multiple emissions tests conducted on each fuel resulting in nearly 1000 emissions tests. While testing has been completed, the Agency is still in the process of working with DOE and CRC to evaluate the test data and develop emission models based on it to allow an understanding of the impacts of fuel changes on emissions. However, since the evaluations of the data have not been co pleted and the data is not publicly available, EPA is not relying on the data for purposes of evaluating the waiver request. EPA has reviewed the data preliminarily solely to determine whether it would be appropriate to delay making a decision until the evaluation is complete and the test program results could be incorporated into a decision on the waiver. EPA's view based on its preliminary review of the data is that it is appropriate to go forward at this time with the waiver decision, as it is anticipated that the test program will reinforce the results found in the earlier studies and in the EPA Predictive Models.

[59] Separately, the Agency has been performing analysis needed to support the anti-backsliding analysis required un-

[CONTENT OMITTED]

3. Evaporative Emissions on MY2007 and Newer Light-Duty Motor Vehicles

a. Introduction

[CONTENT OMITTED]

b. Growth Energy's Submission

[CONTENT OMITTED]

c. Public Comment Summary

[CONTENT OMITTED]

d. EPA Analysis

Growth Energy's conclusions with respect to evaporative emission impacts are not adequately supported by the evidence they submitted. They did not pro-

---

der the Energy Independence and Security Act. We are now in the process of assessing possible control measures to offset the potential increases in ozone and particulate matter that are expected to result from the increased use of renewable fuels required by EISA and in response to the May 21, 2010 presidential memorandum directive. (NOX emissions contribute to the formation of both pollutants.) We will incorporate the results of our analysis under this assessment in a proposal on new motor vehicle and fuel control measures.

vide any test data of in-use motor vehicles showing that they continued to meet their evaporative emission standards over their full useful life, but rather provided only limited information to address these concerns. The Stockholm Study they cited cannot be used to assess actual motor vehicle emission performance in comparison to their standards, but rather simply quantifies the potential increase in vapor generation rates (fuel volatility) for various gasoline-ethanol blends. Increased vapor generation may result in increased motor vehicle emissions, but one needs to evaluate this in the context of evaporative emissions control systems on actual motor vehicles.

The CRC E-65-3 permeation study cited by Growth Energy did not evaluate evaporative emissions from entire motor vehicles, but rather from test rigs set up specifically to study permeation rates with various gasoline-ethanol blends. This study measured diurnal using only very low RVP fuels that met California's reformulated gasoline standards. As a result, it cannot be used to assess the impact on diurnal emissions of higher volatility fuels. However, perhaps the most important limitation of this study is simply that it was a predecessor to much more comprehensive studies not addressed by Growth Energy (E-77, E-77-2, E-77-2b, E-77-2c)[63] into the permeation and evaporative emission impacts of various gasoline-ethanol blends that grew out of the original E-65-3 study.

In addition to these study limitations, perhaps the most important concern is that Growth Energy failed to use the available information to perform the cor-

---

[63] These studies are available at http://www.crcao.org.

rect comparison. To grant a waiver for a fuel or fuel additive under CAA section 211(f)(4), it must be shown that motor vehicles will continue to meet their evaporative emission standards over their full useful life. Short of actual test data on motor vehicles demonstrating this, the evaluation of the potential emissions impacts must compare motor vehicles using the new fuel or fuel additive to their emissions performance on the fuel they were certified on, in this case E0. Instead, when considering the potential permeation and diurnal emission impacts, Growth Energy only drew their conclusion for E15 relative to E10 and E6, which themselves have been demonstrated in the CRC studies to cause elevated permeation and diurnal emissions.

Growth Energy also failed to address potential long-term evaporative emission durability concerns in any meaningful way, referencing only the materials compatibility work discussed in section IV.A.4.

Despite the limitations of the Growth Energy petition with respect to vehicle evaporative emissions, the Agency believes that sufficient information is available through other studies to support the conclusion that as long as E15 meets a summertime gasoline volatility level of no higher than 9.0 psi, Tier 2 compliant motor vehicles—which includes all MY2007 and newer gasoline-fueled light-duty motor vehicles and trucks, and medium-duty passenger vehicles—are expected to continue to comply with their evaporative emissions standards on E15.

By virtue of testing of motor vehicles with gasoline-ethanol blends for more than three decades, it is known that gasoline- ethanol blends can have negative impacts on evaporative emissions when com-

pared to E0 on which the motor vehicles are certified. Ethanol impacts diurnal emissions primarily through its impact on the volatility of the gasoline-ethanol blend, boosting the RVP of the final gasoline-ethanol blend by approximately 1 psi unless the gasoline blendstock is produced to offset the increase. Permeation emissions through elastomers in fuel tanks, lines, valves, and connectors have been shown to be strongly influenced by the presence of ethanol in the fuel, though the Tier 2 standards have minimized this impact for Tier 2 compliant motor vehicles. Hot soak and running loss emissions will change in chemical composition with gasoline-ethanol blends and could be impacted over the long term by impacts of ethanol on motor vehicle component materials. Ethanol is also known to cause degradation of certain materials that have been used in motor vehicle gasoline and evaporative emission control systems that could lead to increased evaporative emissions over time. As a result of the changing emission standards and motor vehicle designs over the years, these impacts of ethanol on evaporative emissions will vary depending on the age of the motor vehicle. The discussion which follows is focused on the impact on Tier 2 motor vehicles.

For hot soak and running loss emissions, E15 should not impact compliance with the evaporative emissions standards (see Figures 1 and 2). Data from the CRC E-77 test programs suggest that there may be some correlation between hot soak and running loss[64] emissions and ethanol content, but the impact

---

[64] Running loss emissions measured in the E-77 programs did not use the certificationcycle. The study was focused on the worst case for permeation emissions and therefore used

is small, of questionable statistical significance, and may be related to permeation that occurs during the testing (see Figures IV.A-1 and 2).

[CHARTS OMITTED]

The CRC E-77 test programs also support the conclusion that diurnal evaporative emissions with E15 are likely to be comparable to those with E0 at the same RVP. Testing performed on E0, E10, and E20 shows that diurnal emissions are a function of the volatility of the fuel, not the ethanol content. As the volatility of the fuel was increased, the number of motor vehicles which experienced canister emissions breakthrough also increased, with seven of eight Tier 2 motor vehicles experiencing canister breakthrough at 10.0 psi RVP. These elevated diurnal emissions are not unexpected since the increased volatility of 10.0 psi versus 9.0 psi fuel results in roughly a 25% increase in evaporative vapor generation that must be captured by the canister beyond what has been required of manufacturers in motor vehicle certification. Almost any canister breakthrough would be enough to cause Tier 2 motor vehicles to exceed their evaporative emissions standard. However, since these tests were done on a more severe diurnal cycle of 65 °F-105 °F (California cycle), as opposed to the

---

back-to-back LA92 cycles to increase the tank temperature with more aggressive driving. The certification cycle uses the NYCC which has many stops and starts, making it more difficult to purge the canister. There was no canister breakthrough measured during running loss tests in the study, therefore the chart in Figure 2 shows the effects of ethanol and RVP on running loss permeation.

Federal requirement of 72 °F-96 °F, these test results only serve to highlight the concern that fuel with a higher volatility than 9.0 psi RVP during the summer will lead to motor vehicles exceeding their evaporative emissions standard in-use, but do not demonstrate it. At the same time, the Agency is also not aware of any data that would show that E15 with an RVP greater than 9.0 psi would in fact allow motor vehicles to continue to meet their evaporative emissions standards. Given this lack of data and the significant potential for increased evaporative emissions at higher gasoline volatility levels, the E15 waiver can only be considered in the context of E15 that maintains the same volatility as required of E0 certification fuel. As long as the volatility of the fuel does not exceed 9.0 psi during the summer, diurnal emissions from E15 are not anticipated to cause the motor vehicles to exceed their evaporative emissions standards. In addition to the increased evaporative emissions impacts that would result from allowing E15 to have a higher RVP than E0, as discussed in section X, EPA interprets CAA section 211(h)(4) as limiting the 1.0 psi waiver to gasoline-ethanol blends that contain 10 vol% ethanol, including limiting the provision concerning "deemed to be in full compliance" to the same 10 vol% blends. This interpretation is also consistent with how EPA has historically implemented CAA section 211(h)(4) through 40 CFR 80.27(d), which provides that gasoline-ethanol blends that contain at least 9 vol% ethanol and not more than 10 vol% ethanol qualify for the 1.0 psi waiver of the applicable RVP standard.

While the CRC E-77 test programs were extremely valuable in assessing diurnal emissions, their primary purpose was to allow the quantification and mod-

eling of evaporative permeation emissions separate and apart from other evaporative emissions for E0, E10, and E20. Some key findings of the test programs were that gasoline-ethanol blends can significantly increase permeation emissions compared to pure gasoline. However, consistent with the results from the E-65-3 test program, it appears that the magnitude of the impact is relatively constant across E6, E10, and E20 blends, i.e., no statistically significant difference. In other words, permeation emissions are a strong function of the presence of ethanol in the gasoline, not a strong function of the concentration within the range tested. Consequently, results for E15 would be anticipated to be comparable to those for E10 and E20. The results of the test program also demonstrate the effectiveness of the Tier 2 evaporative emissions standards at reducing permeation emissions. Based on the test results shown in Figure IV.A-3, the additional permeation emissions caused by the ethanol in E15 relative to results with E0 would appear to add little if anything, given the confidence intervals, to the evaporative emissions measurements of a Tier 2 motor vehicle operating over the Federal test cycle. Given the magnitude of manufacturer's evaporative emissions compliance margins for Tier 2 motor vehicles, as shown in Figure IV.A-4, any increase in permeation due to E15 should not be sufficient to cause Tier 2 motor vehicles to exceed their evaporative emission standards.

[CHARTS OMITTED]

In addition to immediate evaporative emission impacts, Tier 2 motor vehicles' evaporative emissions

controls systems were designed for regular E10 use, and they should be compatible and durable with E15 use over the full useful life of the motor vehicle. While they are tested for compliance with their applicable evaporative emissions standards on E0, these motor vehicles are required to demonstrate durability of the evaporative emissions control systems by performing aging with E10; therefore, these motor vehicles must demonstrate that they meet their evaporative emissions standards over their full useful lives after essentially operating exclusively on E10 prior to the certification testing. In other words, the seals, connections and other evaporative and fuel system hardware must be designed to meet evaporative emissions standards over their full useful lives after aging exclusively on E10. In addition to designing them for sustained E10 exposure, these designs must have sufficient design robustness to encompass production variability in materials and tolerances. Robustness in the design of these components should provide the safety margin manufacturers target for volume production. That same robustness is what we believe should allow for durability on E15, and the available test data supports this conclusion.

Testing conducted as part of the DOE Catalyst Study supports the conclusion that Tier 2 motor vehicle evaporative emissions systems should be durable in-use when operating on E15. The program, described above in section IV.A.1, did not show any evidence of evaporative emissions related problems. The onboard diagnostic monitors on the motor vehicles did not set any fault codes for evaporative emission system leaks. Furthermore, no physical differences were found between the impacts of E15 and E0 on motor vehicle components exposed to fuel or fuel

vapor during the teardowns of the 12 Tier 2 motor vehicles analyzed (six aged on E0 and six aged on E15).[67] In the same study, one of DOE's contractors performed evaporative emission testing on eight of the Tier 2 motor vehicles (four aged on E0 and four aged on E15) on which they were performing motor vehicle aging and exhaust emission deterioration testing. They performed evaporative emission tests at the same mileage intervals where they measured exhaust emission performance. While this was only a limited sample size, and not directly applicable to Federal certification testing due to the lower RVP of the test fuels, they did not show any greater deterioration in evaporative emission performance over time on E15 compared to E0 (See Figure IV.A-5). While EPA is aware of another ongoing study, AVFL-15, which is looking at the durability of fuel system components, our understanding is that it is performing the testing on E20 using an atypical, "aggressive" ethanol. Consequently, while it may provide useful information for the manufacturers in designing their motor vehicles for the worst case conditions, it would not appear that it would have any bearing on the E15 partial waiver decision being made today

[CHART OMITTED]

4. Materials Compatibility for MY2007 and Newer Light-Duty Motor Vehicles

---

[67] Technical Summary of DOE Study on E15 Impacts on Tier 2 Vehicles and Southwest Research Teardown Report. See EPA-HQ-OAR-2009-0211.

a. Introduction

[CONTENT OMITTED]

b. Growth Energy's Submission

[CONTENT OMITTED]

c. Public Comment Summary

Commenters responded to Growth Energy's claims by arguing that E15's effect on fuel system materials has not been properly studied. Many commenters noted that Growth Energy may have selectively excluded important findings from the Minnesota Compatibility Study.

Regarding the Metals Study, some comments noted that 14 out of the 19 metal samples that were tested exhibited greater than 50% measurable mass changes when tested with E20 compared to E10, and if those metals had been compared to E0 instead of E10, some mass changes would have exceeded 200%. The Alliance stated that such mass changes in metals "can be a very noteworthy indication of heavily accelerated corrosive effects" since unprotected metals often accelerate in a non-linear fashion.[76] With respect to specific materials, commenters stated that E15 will increase corrosion of terne plate gas tanks

---

[76] "Alliance of Automobile Manufacturers Comments on Clean Air Act Waiver Application to Increase the Allowable Ethanol Content of Gasoline to 15 Percent, A-22. EPA Docket #EPA-HQ-OAR-2009-0211-2551.1.

which were used in light-duty motor vehicles prior to the mid-1990s.

The Alliance criticized the Elastomers Study for testing raw materials instead of actual fuel system components (such as hoses, seals, and diaphragms), and argued that the impacts of mid-level gasoline-ethanol blends on raw materials would differ substantially from manufactured parts because manufacturers vary the compounds used in the construction of fuel system parts. The Alliance commented further that most of the materials tested were neither being used nor expected to be used in the future. The Alliance also commented that the study failed to justify how a 500 hour exposure test period provides the ability to predict compatibility of materials. The Alliance added that while studies have shown generally acceptable materials compatibility with ethanol up to 10 vol% ethanol, higher dosages have degraded certain metals, elastomers, plastics, and motor vehicle finishes.[77] The Alliance also commented that many researchers have found that the effects of gasoline-ethanol blends on elastomers may be non-linear with increasing ethanol content and that a blend containing 10-25% ethanol may be more harmful to elastomers than E85 or E100.[78] Moreover, the Alliance noted in their comments that over 30 years of research has led to the conclusion that concentrations between 15 and 50% ethanol provide the most

---

[77] SAE J1297, revised July 2007, Surface Vehicle Information Report, Alternative Fuels.

[78] SAE 800786, "Effects of Mixtures of Gasoline With Methanol and With Ethanol on Automotive Elastomers," Ismat A. Abu-Isa, General Motors Research Laboratory. SAE 2007-01-2738.

challenging environment for elastomers compared to other ethanol levels. Regarding specific elastomers, commenters stated that E15 will damage fuel system components made of nitrile rubber while fluorocarbon elastomers have shown the best resistance to swell, tensile strength, and elongation for ethanol gasoline blends at 10 vol%.[79] [80] [81]

Some commenters also expressed concerns with a particular material, polybutlyene terephthalate (PBT), tested in the Plastics Study. The Alliance noted that PBT experienced a slight elevation in tensile elongation as the percentage of ethanol was increased, and that the study was performed at temperatures lower than would be experienced under real-world driving conditions. Since materials like PBT undergo a chemical transformation when exposed to ethanol, the Alliance argued that the elongation effect on PBT would be greater at the elevated temperatures found in real-world driving conditions. The Alliance concluded that E15 will damage fuel system components made of PBT and noted that at least one fuel system supplier used PBT in fuel pump modules between model years 1993 and 2004.

---

[79] SAE 800786, "Effects of Mixtures of Gasoline With Methanol and With Ethanol on Automotive Elastomers," Ismat A. Abu-Isa, General Motors Research Laboratory.

[80] SAE 800789, "The Volume Increase of Fuel Handling Rubbers in Gasoline/Alcohol Blends," Nersasian, A., Passenger Car Meeting, June 9-13, 1980.

[81] SAE 912413 "An Overview of the Technical Implications of Methanol and Ethanol as Highway Motor Vehicle Fuels," Frank Black, U.S. Environmental Protection Agency, Research Triangle Park, NC.

Several comments noted that the sample size for the Fuel Pumps Study was too small to draw conclusions about the effects of E20 and that the duration of the test program included only a short-term, static soak test of 720 hours as opposed to testing periods of at least 2,000 hours and up to 10,000 hours usually used to validate fuel pump designs and materials. Several commenters referred to the materials compatibility work in the Orbital Study[82] [83]which evaluated the effects of E20 on fuel system components for several older model Australian passenger vehicles.[84]

d. EPA Analysis

The Agency is concerned, based on its review of the literature and automotive industry comments, that most pre-Tier 2 motor vehicles, including Tier 0 vehicles (from the 1980s to 1995) and Tier 1 vehicles (from 1996 to 2001), may have been designed for only limited exposure to E10 and consequently may have the potential for increased materials degradation with the use of E15. This potential for materials deg-

---

[82] "Market Barriers to the Uptake of Biofuels Study, A Testing Based Assessment to Determine Impacts of a 20% Ethanol Gasoline Fuel Blend on the Australian Passenger Vehicle Fleet, Report to Environment Australia;" Orbital Engine Company; March 2003.

[83] "Market Barriers to the Uptake of Biofuels Study Testing Gasoline Containing 20% Ethanol (E20), Phase 2B Final Report to the Department of the Environment and Heritage;" Orbital Engine Company; May 2004.

[84] Components were selected from three vehicles, the Holden 1990 VN and 1985 VK Commodore and a 1985 Ford XE Falcon to encompass most component types within the Australian passenger car fleet.

radation may make the emissions control and fuel systems more susceptible to corrosion and chemical reactions from E15 when compared to the certification fuels for these motor vehicles which did not contain any ethanol, and therefore may increase motor vehicle emissions. For MY2000 and older motor vehicles especially, E15 use may result in degradation of metallic and non-metallic components in the fuel and evaporative emissions control systems that can lead to highly elevated HC emissions from both vapor and liquid leaks. Potential problems such as fuel pump corrosion or fuel hose swelling will likely be worse with E15 than historically with E10, especially if motor vehicles operate exclusively on E15. Since ethanol historically comprised a much smaller portion of the fuel supply, in-use experience with E10 was often discontinuous or temporary, while material effects are time and exposure dependent. Thus, issues may surface with E15 that may not have surfaced historically in-use with E10.

Newer motor vehicles, such as Tier 2 and NLEV vehicles (MY2001 and newer), on the other hand, were designed to encounter more regular ethanol exposure compared to earlier model year motor vehicles. IUVP, introduced under CAP2000, requires manufacturers to perform exhaust and evaporative emissions tests on in-use motor vehicles. This emphasis on real-world motor vehicle testing prompted manufacturers to consider different available fuels when developing and testing their emissions systems. Additionally, beginning with Tier 2, the durability demonstration procedures required the demonstration of evaporative emission system durability on E10. As a result, the materials in Tier 2 motor vehicles have been able to mitigate the permeation ef-

fects of ethanol in the fuel, as discussed in section IV.A.2. As a result, our engineering analysis would suggest that Tier 2 compliant motor vehicles are more likely to be compatible with E15 than older motor vehicles.

While Growth Energy asserted that 15% methanol was a worst-case fuel for E15 materials compatibility purposes, the Agency is not aware of any analysis or industry standard practice that confirms that motor vehicle materials tested on 15% methanol test fuels will cover gasoline-ethanol blends up to 15% for materials compatibility and evaporative emissions purposes. SAE J1681 provides specifications and formulations for evaluating oxygenates in gasoline, including ethanol, on automotive fuel system components.[85] EPA's evaluation of SAE J1681 does not reveal that 15% methanol would be the surrogate worst case test fuel in evaluating all oxygenates. To the contrary, the fuel formulations for aggressive methanol and aggressive ethanol are different, as described in Appendix E of SAE J1681. EPA believes this difference is to account for contaminants that may be present in these two different products during production and/or transportation of each product. To properly evaluate the potential worse case impacts of a mid-level gasoline-ethanol blend, such as E15, on motor vehicle fuel systems components, the Agency believes it would be prudent to use the aggressive ethanol fuel formulation provided in Appendix E of SAE J1681, to the extent that it reflects E15 according to ethanol content, as well as any contaminant, that

---

[85] SAE J1681, "Surface Vehicle Recommended Practice, for Gasoline, Alcohol and Diesel Fuel Surrogates for Materials Testing," Issued 1992-09, Revised 2000-01.

may be associated with the production or transportation of an E15 gasoline product. The Agency notes that SAE J1681 includes language describing potential impacts of oxygenates on metals (from by-products derived from oxygenates and especially when water is present), polymers (including elastomers and plastics), and polymer systems (including laminates and multi-layered components).[86]

e. Conclusion

The Agency has reviewed the studies and information submitted by Growth Energy, commenters, and other publicly available information to further assess the potential materials compatibility performance of E15, including the Minnesota Compatibility Studies.[87] The Minnesota studies were on component parts using laboratory bench tests rather than durability studies of whole motor vehicle fuel systems simulating "real world" motor vehicle use. Such tests are typically used to provide a first level screening of potential materials prior to more real-world testing to demonstrate materials compatibility of actual vehicle and engine components. In addition, the study admittedly assessed only a subset of materials used in motor vehicles and nonroad products over the years, and provided no information with which to correlate the materials tested with those in use in either the MY2007 and newer motor vehicles or older motor vehicles and nonroad products. Manufacturers have continually modified engine, fuel system, and

---

[86] Ibid.

[87] SAE J1297, revised July 2007, Surface Vehicle Information Report, Alternative Fuels.

emissions control system materials over the years in response to technology needs, in-use fuel quality changes (including E10), and emission standards. In many cases, they have incorporated special coatings and barriers in existing materials to address problems discovered in the field or in emissions testing. Furthermore, as commenters point out, there were differences found in the testing for some of the materials, which would suggest further testing was necessary. Finally, conclusions Growth Energy reached comparing the results of some of the materials on E20 to E10 are not helpful in assessing the impacts of E15 relative to E0. Consequently, while the Minnesota studies are informative, they cannot by themselves be used to draw any definitive conclusions. Rather, the conclusion is that actual vehicle durability testing is warranted.

In the case of MY2007 and newer motor vehicles, the Agency believes that the DOE Catalyst Study has provided the additional information needed. Along with (1) our engineering analysis of the types of changes manufacturers have made in response to the Tier 2 motor vehicle standards and the rapid rise of E10 use across the nation; (2) the limited information available from the Minnesota studies; and (3) the lack of any information from commenters showing definitive problems on Tier 2 compliant motor vehicles, we believe that the durability testing performed by DOE as discussed in section IV.A.1. above is sufficient to provide assurance that MY2007 and newer motor vehicles will not exhibit any serious materials incompatibility problems with E15. Not only did the DOE Catalyst Study not uncover any emissions deterioration problems with E15 in comparison to E0, it also did not uncover any material

differences upon tear-down and inspection of six of the motor vehicle pairs tested out to FUL.[88] Therefore, the Agency does not expect that there will be materials compatibility issues with E15 that would cause MY2007 and newer light-duty motor vehicles to exceed their exhaust or evaporative emission standards over their full useful lives.

5. Driveability and Operability for MY2007 and Newer Light-Duty Motor Vehicles

a. Introduction

[CONTENT OMITTED]

b. Growth Energy's Submission

[CONTENT OMITTED]

c. Public Comment Summary

Several commenters mention specific methodological issues with the driveability studies included in Growth Energy's waiver request. The Alliance pointed out what they believe to be several flaws with the Minnesota Driveability Study. First, they noted low response rates for the drivers rating operability concerns. Second, the trained drivers did not drive motor vehicles back-to-back on E0 and E20, which made direct comparison of driveability on E0 to E20 impos-

[88] Only a difference in intake valve deposits was seen.

sible. Third, the Alliance argues that many of the batch fuel analyses were suspect, casting doubt on the actual fuel properties used in the study. The Alliance and others had similar critiques with the MCAR Study and also noted that neither the Minnesota Driveability Study nor the MCAR Study were peer-reviewed. With regard to the RIT Study, as mentioned previously, many commenters point out that the study summary provided with Growth Energy's public comments does not provide enough detail to conduct a thorough independent analysis, making it difficult to verify Growth Energy's claims. The Alliance argues that more testing needs to be conducted evaluating how ethanol affects T50 and TV/L in the gasoline-ethanol blends containing greater than 10 vol% ethanol.

Growth Energy responded to these driveability issues in their comments by reiterating the arguments made in their E15 waiver application and noting that the updated summary of the RIT Study that they submitted as part of their comments showed no driveability or mechanical problems with approximately 400 motor vehicles driven on E20 for over 1.5 million miles.

Commenters also raised questions regarding the sensitivity of the OBD system to increased gasoline-ethanol blends and some ongoing studies to quantify potential impacts. Honda submitted some limited data regarding potential motor vehicle sensitivity to higher gasoline-ethanol blends. Additionally, at the Mid-Level Ethanol Blends Research Coordination Group meeting on May 5, 2010, a presentation was made to members regarding possible implications of increased levels of ethanol on the vehicle OBD sys-

tems.[92] The presentation described the findings of the first phase of CRC project E-90 which is intended to study the impact of ethanol on OBD systems. Phase 1 of the study was designed to investigate differences in the status of vehicle OBD monitors and other emissions control information in E10 versus E0 areas of the country in an attempt to isolate potential ethanol impacts to OBD. Since E15 and E20 are not currently legal fuels for conventional motor vehicles (i.e., non-flex fuel vehicles), the study used the differences between E0 and E10 to project potential impacts of E15 and E20 on the OBD system but did not actually perform any testing on E15 or E20. Similarly, Honda did not perform any actual testing using E15 or E20 but instead used the E0 to E10 information, combined with potential component tolerance stack-up, to assess risk of having the OBD system set a fault and illuminate the malfunction indicator lamp (MIL).

d. EPA Analysis

The Agency understands the concern for driveability and other operational issues that could potentially occur with an increase in ethanol content. During the initial introduction of ethanol over 30 years ago, problems with hot fuel handling were encountered due to the ethanol boiling in the fuel system, resulting in operational issues like stalls, engine hesitations, misfires and vapor lock preventing hot restarts. Since the introduction of ethanol, motor vehicles have evolved to alleviate these early issues,

---

[92] "E15/E20 Tolerance of In-Use Vehicle OBD-II Systems."Presentation available at http://www.crcao.com/.

mainly through fuel system design. These changes included the switch to fuel injection with an associated increase in the system fuel pressure, all of which have worked to reduce the potential for hot fuel issues when operating on gasoline-ethanol blends. In fact, E85 capable FFVs sold today typically operate at similar or the same fuel pressure as their non-FFV counterparts with no reported issues. Due to the stringent emission standards requiring precise fuel control, Tier 2 vehicles have been engineered with the highest fuel pressure systems in vehicle history which make them also highly robust at managing ethanol's low boiling point. The Agency does not believe that properly functioning fuel injected vehicles, particularly Tier 2 vehicles, will encounter any new heat related operational issues with an increase in ethanol content of the fuel to 15 vol%.

Driveability issues could also occur from incompatibility between E15 and manufacturers' approaches at calibrating a motor vehicle for fuels it is expected to encounter in-use. If the error in fuel quantity, caused by the fuel properties of E15 (i.e., oxygen content), is beyond what the system is designed to compensate for, driveability issues (cold start roughness, hesitations) can arise. However, due to the large variability found in fuels in the market today which can result in similar driveability behaviors, from experience with in-use fuels, manufacturers have employed methods to counter or compensate for fuel differences and try to prevent these driveability issues. Because of the stringent Tier 2 emission standards, Tier 2 vehicles required focused attention to cold start fueling to ensure emission compliance while tolerating the different fuel blends that the vehicle could encounter in-use. This resulted in modification of calibration

and control strategies by manufacturers to balance the need for precise cold start fuel that meet both emission requirements and operate properly when fuel properties vary in-use. Because manufacturers already calibrate motor vehicles based on their experience with in-use fuels, combined with lack of any reported driveability issues in any of the E15 and E20 test programs during both laboratory and road testing, the Agency believes that properly functioning and maintained motor vehicles will not experience an increase in driveability issues when operating on a properly blended E15 fuel. Collectively, the RIT Study, Minnesota Driveability Study, MCAR Study and a CRC cold start study[93] did not report any fuel related driveability issues demonstrated across different E15 and E20 seasonally blended fuels and verified during winter, summer and shoulder seasons, supporting the Agency's findings.

Motor vehicles produced since approximately 1995 have been equipped with OBD systems that monitor all aspects of the exhaust and evaporative emissions control system. The Agency recognizes that the additional oxygen content in E15 will be identified by the OBD system as a shift in the fueling requirements. In some motor vehicles, a shift in the fuel requirements beyond predetermined thresholds, based on the manufacturer's research, can result in a MIL illumination. However, across the many different test programs with different motor vehicles and duty cycles, including lab testing, mileage accumulation and in-use operation, there were no reported incidences of MIL illumination from the use of increased etha-

---

[93] CRC Report No. 652, "2008 CRC Cold-Start and Warm-up E85 and E15/E20 Driveability Program," October 2008.

nol for both E15 and E20. Based on this, the Agency believes that properly functioning (i.e., within component tolerances) and maintained motor vehicles will not experience an increase in MIL illumination due to the use of E15. However, for a vehicle that has a component issue or failure (i.e., intake vacuum leak, exhaust leak, etc.) which indirectly effects the same OBD monitors as ethanol content, it is possible that the increase in ethanol may push the OBD system monitor over the calibrated thresholds and cause a MIL illumination.

e. Conclusion

[CONTENT OMITTED]

V. Nonroad Engines and Equipment (Nonroad Products)

A. Introduction

Past waiver decisions were made solely on the basis of the emission impacts of the fuel or fuel additive on motor vehicles. However, with the passage of the Energy Independence and Security Act of 2007, CAA section 211(f)(4) was expanded to require that the emissions impacts on nonroad engines and nonroad vehicles (collectively referred to as nonroad products in this section) also be taken into consideration when reviewing a waiver application. Nonroad products for the following discussion is defined as those nonroad products that contain spark-ignition engines and are used to power such nonroad vehicles and equipment as boats, snowmobiles, generators, lawnmowers, forklifts, ATVs, and many other similar

products. These nonroad products are typically used only seasonally and occasionally during the season which is very different from the daily use of automobiles. Due to the seasonal and occasional use, consumers can hold onto and use their nonroad products over decades with some being 30 or 40 years old. Nonroad engines are typically more basic in their engine design and control than engines and emissions control systems used in light-duty motor vehicles, and commonly have carbureted fuel systems (open loop) and air cooling (extra fuel is used in combustion to help control combustion and exhaust temperatures).

[CONTENT OMITTED]

C. Public Comment Summary

[CONTENT OMITTED]

Several commenters argue that Growth Energy does not provide data concerning the performance of many categories, classes, and families of nonroad engines on E15, and the test data from the DOE Pilot Study is not adequate to cover all nonroad applications. Notable data gaps include information regarding marine engines, snowmobiles, recreational vehicles, motorcycles, and several classes of small nonroad engines that were not tested in the DOE Pilot Study. In addition, several commenters noted, some of the operability issues may pose a significant safety hazard to operators of small nonroad engines

due to higher idle speeds and inadvertent clutch engagement.

[CONTENT OMITTED]

IX. Legal Issues Arising in This Partial Waiver Decision

A. Partial Waiver and Conditions of E15 Use

As stated in EPA's notice for comment on the E15 waiver request, a possible outcome after the Agency reviewed the record of scientific and technical information may be an indication that a fuel up to E15 could meet the criteria for a waiver for some vehicles and engines but not for others. In this context, the Agency noted that one interpretation of section 211(f)(4) is that the waiver request could only be approved for that subset of vehicles or engines for which testing supports its use. We also stated that such a partial waiver for use of E15 may be appropriate if adequate measures or conditions could be implemented to ensure its proper use. EPA invited comment on the legal aspects regarding a waiver that restricted the use of E15 to a subset of vehicles or engines, and the potential ability to impose conditions on such a waiver.

We received a number of comments expressing opposition to a partial waiver based on a lack of legal authority under section 211(f)(4). Some of those same commenters, as well as others, also stated that EPA should *first* conduct and finalize a rulemaking under section 211(c) to mitigate the potential for misfueling and limit the types of mobile sources for which E15 may be used.

Many commenters pointed to the language in section 211(f)(4) and argued that the use of the word "any" in the phrase "will not cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is used) to achieve compliance by the vehicle or engine," means that if the waiver applicant has not established that the use of E15 meets the waiver criteria for *any* type of motor vehicle or nonroad product, then the waiver must be denied. Noting the statutory provision's use of the word "any," commenters asserted that should E15 cause or contribute to a failure of *any* emission control device to achieve compliance under *any* single circumstance, then the waiver applicant has not met the waiver criteria and the waiver must be denied in its entirety. Another commenter suggested that the word "any" modifies "emission control device" and that if an emission control device for *any* of the types of vehicles in the parenthetical language in section 211(f)(4) is implicated, then the waiver must be denied. Still another commenter suggested that "In amending section 211(f)(4) in 2007 with enactment of the Energy Independence and Security Act, Congress expanded the types of devices for which an applicant must establish that a fuel or fuel additive will not cause or contribute to a failure while retaining the prohibition of causing or contributing to the failure of 'any' device. With the expansion of section 211(f)(4), EPA is directed to only approve a waiver if all nonroad and on- road vehicles and engines would not be adversely affected." Commenters asserted that the provision effectively required that there should be a "general purpose" fuel. The commenters noted that

EPA would contradict this direction if it failed to address impacts on any portion of the vehicles or engines. Essentially, the implication of all of these assertions is that EPA can only grant a waiver if *all* emission control devices in *all* types of mobile sources listed in the statute will not be adversely impacted by E15.

We also received several comments suggesting that if EPA desires to grant a partial waiver, it must first proceed under section 211(c) with a separate and full rulemaking to analyze the costs, benefits, necessary lead time, and the technological feasibility of a partial waiver. The commenters stated that this rulemaking should also include an analysis of the partial prohibition and controls on the use of E15 and include detailed regulatory requirements to ensure adequate control measures and to mitigate misfueling with E15. Commenters stated that the inclusion in section 211(f)(4) of 270 days by which EPA must act does not allow enough time to address all the necessary marketing and other issues and thus Congress could not have envisioned a partial waiver.

Growth Energy and ACE stated that the Agency has the authority to grant a partial waiver or that EPA's authority for a partial waiver is a permissible interpretation of CAA authority, but that the evidence suggests a waiver for all vehicles and engines on the road today is appropriate.

We also received comment noting that the prohibition in section 211(f)(1) only applies to the use of any fuel or fuel additive in light-duty motor vehicles, indicating that the grant of the waiver of this prohibition under section 211(f)(4) is not dependent on findings with respect to nonroad products. The com-

menter further noted that although EPA has the authority and discretion to look at the effect of a fuel or fuel additive on nonroad products (in the context of examining impacts on motor vehicles), nothing in the statute or legislative history indicates that the amendment to section 211(f)(4) sought to limit EPA's discretion for issuing a waiver for motor vehicles. In light of Congress' decision in the Energy Independence and Security Act of 2007 to substantially increase the Renewable Fuel Standard Program's volume mandates, this commenter suggests that reading the word "any" in section 211(f)(4) as amended by the 2007 Energy Act to apply to anything more than any emission control systems on the subset of motor vehicles would be at odds with congressional intent.

Regarding EPA's authority to impose conditions on a waiver, we received comment stating that EPA has the authority to grant waivers subject to a broad range of conditions that ensure that the fuel or fuel additive will not cause or contribute to the failure of any emission control device or system. One commenter pointed to four of the eleven waivers EPA has issued since 1977 that have placed conditions on a waiver.[135] In EPA's first waiver decision in 1978, the

---

[135] *See* Sun Petroleum Products Co.; Conditional Grant of Application for Fuel Waiver for 0–5.5% methanol/TBA, 44 FR 37,074 (June 25, 1979); E.I.DuPont de Nemours & Co.; Conditional Grant of Application for Fuel Waiver for 5% methanol/2% cosolvent alcohols, specified corrosion inhibitor, Decision Document, 51 FR 39,800 (Oct. 31, 1986); Texas Methanol Corp.; Conditional Grant of Application for Fuel Waiver for Octamix (5% methanol, 2.5% cosolvent alcohols, specified corrosion inhibitor), Decision Document, 53 FR 33,846 (Sept. 1, 1988); Sun Refining and Marketing Co.; Conditional Grant of Application for Fuel Waiver for 15%

Agency discussed its authority to grant conditional waivers, noting that it may grant a waiver "conditioned on time or other limitations," so long as "the requirements of section 211(f)(4) are met."[136] This commenter also points to the legislative history of section 211(f)(4) which makes clear that EPA has authority to grant conditional waivers. The 1977 Senate Report regarding section 211(f)(4) states: "The Administrator's waiver may be under such conditions, or in regard to such concentrations, as he deems appropriate consistent with the intent of this section." Senate Report No. 95–125, 95th Congress, 1st Session 91 (1977), pg 91.

The issue before EPA is whether it is reasonable to interpret section 211(f)(4) as authorizing EPA to grant a partial waiver under appropriate conditions, as in today's decision. If Congress spoke directly to the issue and clearly intended to not allow such a partial waiver, then EPA could not do so. However, if Congress did not indicate a precise intention on this issue, and we believe that section 211(f)(4) is ambiguous in this regard, then a partial waiver with appropriate conditions would be authorized if it is a reasonable interpretation. EPA has considered the

---

MTBE, Decision Document, 53 FR 33,846 (Sept. 1, 1988). These conditions have taken various forms, from restrictions on the chemical composition and additive concentration of the waiver fuel and requirements to meet ASTM and seasonal volatility standards, to specific testing protocols and mandates that a fuel manufacturer take "all reasonable precautions" to guard against unauthorized uses of the waiver fuel.

[136] *See* Ethyl Corp., Denial of Application for Fuel Waiver for MMT (1/16 and 1/32 gpg Mn), 43 FR 41,424 (Sept. 18, 1978).

text and structure of this provision, as well as the companion prohibition in section 211(f)(1), and believes it is a reasonable to interpret section 211(f)(4) as providing EPA with discretion to issue this partial waiver with appropriate conditions.

It is important to put section 211(f)(4) in its statutory context. The prohibition in section 211(f)(1) and the waiver provision in section 211(f)(4) should be seen as parallel and complementary provisions. Together they provide two alternative paths for entry into commerce of fuels and fuels additives. The section 211(f)(1) prohibition allows fuels or fuel additives to be introduced into commerce as long as they are substantially similar to fuel used to certify compliance with emissions standards, and the section 211(f)(4) waiver provision allows fuels or additives to be introduced into commerce if they will not cause or contribute to motor vehicles and nonroad products to fail to meet their applicable emissions standards. EPA's authority to issue a waiver is coextensive with the scope of the prohibition – whatever is prohibited can also be the subject of a waiver if the criteria for granting a waiver are met. In addition, the criteria for each provision have similar goals. They are aimed at providing flexibility to the fuel and fuel additive industry by allowing a variety of fuels and fuel additives into commerce, without limiting fuels and additives to those products that are identical to those used in the emissions certification process. This flexibility is balanced by the goal of limiting the potential reduction in emissions benefits from the emissions standards, even if some may occur because a fuel or fuel additive is not identical to certification fuel or it leads to some emissions increase but not a violation of the standards. Together, these are indi-

cations that these provisions are intended to be parallel and complementary provisions.

The section 211(f)(1) prohibition has evolved over time. Initially it was adopted in the 1977 amendments of the Act, and was much more limited in nature. It applied only to fuels or fuel additives for general use, and was also limited to fuels or fuel additives for use in light-duty motor vehicles. EPA interpreted this as applying to bulk fuels or fuel additives for use in unleaded gasoline. The prohibition did not apply to other gasoline, or to diesel fuels or alternative fuels, or to fuel additives that were not for bulk use. It was thus relevant only to the subset of motor vehicles designed to be operated on unleaded gasoline.

In 1990 Congress amended the prohibition and broadened it. It now applies to "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." This extended the scope of the prohibition to apply to all gasoline, to diesel fuel, and to other fuels such as E85. However, the concept of applying this prohibition based on the relevant subset of vehicles continues. For example, a diesel fuel that is introduced into commerce for diesel vehicles does not need to be substantially similar to gasoline fuel or other fuels intended for non-diesel vehicles. This is so even though Congress used the phrase "substantially similar to *any* fuel or fuel additive utilized in the certification of *any* * * * vehicles or engine" (emphasis supplied). Clearly Congress did not intend the use of the term "any" in the prohibi-

tion to always mean all motor vehicles or 100% of the motor vehicle fleet. Diesel fuel does not need to be substantially similar to the fuel used in the certification of gasoline vehicles, and E85 does not need to be substantially similar to fuel used in the certification of diesel vehicles. For example, manufacturers who want to introduce E85 fuel or fuel additives for E85 look to the certification fuel that was used for the subset of vehicles that were certified for use on E85.

In some limited cases, EPA has approved a fuel additive as substantially similar even when it is introduced into commerce for use in just one part of a single vehicle manufacturer's product line. For example, where a fuel additive is considered part of the emissions control system for a vehicle model, and is certified that way by the vehicle manufacturer, then it is not a violation of the substantially similar prohibition for manufacturers of the fuel additive to introduce it into commerce for use in just that very small subset of vehicles as long as it is substantially similar to the fuel additive used in the certification of that vehicle model.[137] In all of these cases, broad to narrow subsets of motor vehicles can be considered when deciding whether the introduction of a fuel or fuel additive for use by that subset of motor vehicles is in compliance with the prohibition.

EPA has in fact applied this construct of this provision in all of its past waiver decisions. EPA has previously said that it is virtually impossible for an applicant to demonstrate that a new fuel or fuel additive does not cause or contribute to *any* vehicle or engine failing to meet its emissions standards. In-

---

[137] *See* 54 FR 4834 (November 22, 1989).

stead, EPA and the courts allow applicants to satisfy this statutory provision through technical conclusions based on appropriately designed test programs and properly reasoned engineering judgment.[138] For example, the sample size in these test programs does not include *all* motor vehicles in the current fleet; the sample size is comprised of a statistically significant sample of motor vehicles that, once tested, will enable the applicant to extrapolate its findings and make its demonstration. EPA believes that this practice of focusing on a relatively small but representative subset of motor vehicles does not violate the statutory use of the word "any" in this provision.

Since the waiver and the substantially similar provisions are parallel and complementary provisions, this clearly raises the question of whether a waiver can also be based on a subset of motor vehicles meeting the criteria for a waiver. EPA believes the text and construction of section 211(f)(4) supports this interpretation.

First, the term "waive" as used in section 211(f)(4) is not modified in any way. Normally one would read this provision as a general grant of waiver authority, encompassing both partial and total waivers, as long as the waiver criteria are met. Second, the waiver criteria, like section 211(f)(1), have evolved over time. In 1977, the criteria were phrased as providing for a waiver when the fuel or fuel additive "will not cause or contribute to a failure of any emission control device or system (over the useful life of any vehicle in which such device or system is used) to achieve

---

[138] *See* 44 FR 10530 (February 21, 1979); *Motor Vehicle Mfrs. Ass'n. et. al. v. EPA*, 768 F.2d 385 (DC Cir. 1985).

compliance by the vehicle with the emission standards to which it has been certified." This was not modified in the 1990 amendments. In EISA 2007, Congress amended the waiver criteria, providing for a waiver when the fuel or fuel additive will not "cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is used) to achieve compliance by the vehicle or engine with the emission standards to which it has been certified." Congress uses the term "any" in section 211(f)(4), as it does in several places in section 211(f)(1). One use of the term "any" was deleted in the 2007 amendments, when the parenthetical was broadened to include consideration of nonroad engines and nonroad vehicles as well as motor vehicles. The term "any," however, has always been paired with the consistent use of the singular when referring to vehicles and emissions control systems – "the vehicle" and the emissions standards to which "it" is certified, and the "vehicle in which such device or system is used." Certainly Congress did not state that the applicant has to demonstrate that the fuel or fuel additive would not cause *any* devices or control systems, over the useful lives of the motor vehicles or nonroad products in which they are used, to fail to achieve the emissions standards to which they are certified. If Congress had stated that, then it would be clear, as one commenter suggests, that EPA should only grant a waiver if *all* emission control devices in *all* the types of mobile sources listed would

not be impacted by the fuel. But Congress did not state that.[139]

Several aspects of section 211(f) thus support the reasonableness of EPA's interpretation. The prohibition and the waiver provisions are properly seen as parallel and complementary, and the prohibition properly can be evaluated in terms of appropriate subsets of motor vehicles, notwithstanding the use of the term "any" to modify several parts of the prohibition. This clearly raises the concept of also applying the waiver criteria to appropriate subsets of motor vehicles. "Waive" is reasonably seen as a broad term that generally encompasses a total and a partial waiver, as well as the discretion to impose appropriate conditions. The criteria for a waiver also refer to "any" but the entire provision does not provide a clear indication that Congress intended to preclude consideration of subsets of motor vehicles when considering an application for a waiver. Finally, a partial waiver gives full meaning to all of the provisions at issue.

For example, in this case, granting a partial waiver means that E15 can be introduced into commerce for

---

[139] *New York v. EPA*, 443 F.3d 880[ ] (DC Cir. 2006) concerned the use of the word "any" in a different provision in the Clean Air Act and does not lead to any different conclusion here. The Court found that the statutory language, context, and legislative intent of that provision required an expansive meaning of the phrase "any physical change" in the definition of "modification" in CAA section 111(a)(4). EPA is also applying the term 'any" in an expansive manner, but in the context of a subset of motor vehicles. This takes into account the context, text, and purposes of both section 211(f)(1) and (f)(4), which, as discussed above, envisions use of such subsets of vehicles.

use in a subset of motor vehicles, MY2007 and newer light-duty motor vehicles, and only for use in those motor vehicles. For those motor vehicles, EPA is not making a finding of it being substantially similar, but E15 has been demonstrated to not cause or contribute to these motor vehicles exceeding their applicable emissions standards. It will also not cause any other motor vehicles or any other on or off-road vehicles or engines to exceed their emissions standards since it may not be introduced into commerce for use in any other motor vehicles or any other vehicles or engines. Thus, under a partial waiver, as the commenter suggested, all emission control devices in all the types of mobile sources listed will not be adversely impacted by the fuel. It can only be introduced into commerce for those vehicles and engines where it has been shown not to cause emissions problems; for other types of mobile sources, it cannot be introduced into commerce for use in such vehicles and engines. In concept, therefore, the combination of this partial waiver, with appropriate conditions, and partial retention of the substantially similar prohibition, has the same effect as when the criteria for a total waiver has been met – the fuel or fuel additive will only be introduced into commerce for use in a manner that will not cause violations across the fleet of motor vehicles and nonroad products. It can only be introduced into commerce for use in vehicles and engines where it has been shown not to cause violations of the emissions standards, and may not be introduced into commerce for use in other vehicles or engines.

EPA recognizes that a partial waiver raises implementation issues regarding how to ensure that a fuel or fuel additive is only introduced into commerce for use in the specified subset of motor vehicles. The

discretion to grant a partial waiver includes the authority and responsibility for determining and imposing reasonable conditions that will allow for effective implementation of a partial waiver. In this case, EPA has conditioned the waiver on various actions that the fuel or fuel additive manufacturer must take. The actions are all designed to help ensure that E15 is only used by the MY2007 and later motor vehicles specified by the waiver. If a fuel or fuel additive manufacturer does not comply with the conditions, then EPA will consider their fuel or fuel additive as having been introduced into commerce for use by a broader group of vehicles and engines than is allowed under the waiver, constituting a violation of the section 211(f)(1) prohibition.

EPA recognizes, as several commenters have suggested, that EPA can impose waiver conditions only on those parties who are subject to the section 211(f)(1) prohibition and the waiver of that prohibition. These parties are the fuel and fuel additive manufacturers. Waiver conditions can apply to them, but cannot apply directly to various downstream parties, such as a retailer who is not also a fuel or fuel additive manufacturer. This is one reason EPA is also proposing specific misfueling mitigation measures in a separate rulemaking under section 211(c), to minimize any risk of misfueling. This will also facilitate compliance with certain of the waiver conditions.

Many commenters suggested that before EPA can grant a waiver of any type under section 211(f)(4), the Agency must first issue a rule under section 211(c) that addresses the proper prohibition and control of a new fuel or fuel additive to the extent neces-

sary before such fuel or fuel additive is permitted under section 211(f)(4). However, there is no mention of timing in these two statutory provisions and EPA believes it appropriate to consider the merits of a section 211(f)(4) waiver request on its face.

B. Notice and Comment Procedures

Section 211(f)(4) requires that EPA grant or deny an application for a waiver "after public notice and comment." As discussed in detail in Section II.B., EPA published notice of receipt of the waiver application on April 21, 2009 and provided the public with an extended public comment period of 90 days to submit comments on the waiver application. EPA received approximately 78,000 comments during the public comment period.

Commenters have asked the Agency for a second public comment period so that they may review and comment on the testing data generated by the DOE Catalyst Study. An additional comment period is neither necessary nor required by law. EPA has continued to accept comments on the waiver application even after closure of the formal comment period, and has considered comments received even as late as early October. All of these comments have been included in the public docket and thus made available to all members of the public for review and comment. Many commenters have taken the opportunity to submit additional comments in light of other comments and information included in the docket.

Data from ongoing vehicle testing programs, including DOE's data, have been included in the public docket shortly after EPA has received the information, making it available for the public's review and comment as soon as practicable. Many com-

menters providing substantive feedback on the waiver application have been involved in one or more of the various testing programs, including DOE's, and consequently have had immediate access to the data. Comments submitted to the docket reflect that commenters have had access to and an opportunity to consider the various testing information cited by EPA in the waiver decision.

EPA has also held numerous meetings with stakeholders in which stakeholders have shared their comments, concerns and additional data regarding the waiver request. Information received at these meetings has been made available in the public docket.

In view of the access that has been made available to the relevant information in the public docket, EPA believes no need exists for a second public comment period. Moreover, EPA has already satisfied its notice and comment requirements for this Decision and has no legal obligation to provide an additional notice and comment period. EPA satisfied its procedural requirements through the public notice and comment period EPA already provided (see Section II.B) and nothing in section 211(f)(4) mandates a second comment period.[140]

---

[140] This Decision is distinguishable from the outcome in *Air Transport Ass'n of America v. FAA*, 169 F.3d 1 (DC Cir. 1999). In *ATA v. FAA*, the DC Circuit found that the FAA's reliance on ex parte information submitted after closure of the public comment period violated the applicable notice and comment period requirements. The Court's holding was primarily based on the private nature of the information. *ATA*, 169 F.3d at 8 ("The important point is that because the transmission of this information * * * was never public, peti-

C. "Useful Life" Language in Section 211(f)(4)

In making any waiver decision, section 211(f)(4) indicates that EPA should ensure that any new fuel or fuel additive will not cause or contribute to a vehicle or engine failing to meet its emissions standards over its useful life. The Clean Air Act authorizes EPA to define "useful life" for the vehicles and engines EPA regulates, see CAA sections 202(d) and 213(d), and EPA includes those definitions in the same regulations that contain the emission standards for those vehicles and engines.

As discussed above, the construction of section 211(f) indicates that the meaning of section 211(f)(4) is best determined by reading it in context with the substantially similar prohibition in section 211(f)(1). Section 211(f)(1) contains the general prohibition against introducing fuels and fuel additives that are not "substantially similar" to the certification fuels used for certifying 1975 and subsequent model year motor vehicles with EPA's emissions standards. The prohibition is expansive, effectively protecting MY1975 and newer motor vehicles from using fuels or fuel additives that could detrimentally impact their ability to meet their emissions standards. In enacting this provision, Congress stated that "the intention of this new subsection [(f)] is to prevent the use of any new or recently introduced additive in those unleaded grades of gasoline required to be used in 1975 and subsequent model year automobiles which may impair emission performance of vehi-

---

tioner did not have a fair opportunity to comment on it."). In contrast, the data relied upon by the Agency in this waiver decision were included in the pubic docket for the decision prior to its issuance.

cles * * *." *Senate Report* (Environment and Public Works Committee) No. 95–127 (To accompany S. 252), May 10, 1977, pg 90. This general prohibition equally protects all MY1975 and newer motor vehicles from the use of new fuels and fuel additives that the motor vehicles may not have been designed to use and could degrade their emissions control systems.

The section 211(f)(1) prohibition is designed to protect the emissions control systems for the breadth of motor vehicles in the fleet, whether they are within or outside the regulatory useful life of an applicable emissions standard. This broad scope recognizes that the emissions control system of a motor vehicle continues to operate and provide important emissions benefits throughout the actual life of the motor vehicle, including the many miles or years that it may be operated past its regulatory useful life. Thus, it is important that the motor vehicle continue to use fuels that do not interfere with the continued normal operation of the emissions control system after its regulatory useful life. That normal operation may not ensure that the motor vehicle stills meets the applicable emissions standards, but it is typically such that it provides significant emissions control benefits for the country. Congress recognized this and prohibited entry into commence of fuels or fuel additives that could interfere with this result, no matter how old the motor vehicle. Congress also recognized this goal by prohibiting tampering anytime during the actual life of the motor vehicle, not just during its regulatory useful life. *See* CAA section 203(a)(3).[141]

---

[141] Additionally, Congress authorized EPA to set separate

In promulgating CAA section 211(f)(4), Congress provided EPA with the authority to waive the prohibition for particular fuels or fuel additives, but only when the fuel or fuel additive manufacturer demonstrated that motor vehicles could still meet their emissions standards while using the particular fuel or fuel additive. *See Senate Report* (Environment and Public Works Committee) No. 95–127, May 10, 1977, pg 91 ("The waiver process * * * was established * * * so that the prohibition could be waived, or conditionally waived, rapidly if the manufacturer of the additive or the fuel establishes to the satisfaction of the Administrator that the additive, whether in certain amounts or under certain conditions, will not be harmful to the performance of emission control devices or systems."). While section 211(f)(4) refers to the "useful life" of the motor vehicle, that is part of the reference to causing or contributing to the noncompliance of the motor vehicle with its emission standards, as the emissions standards are defined in part by the useful life provision. *See House Conference Report* No. 95–564 (To accompany H.R. 6161), Aug. 3, 1977, pp 160–162 ("The conferees also intend that the words 'cause or contribute to the failure of an emission control device or system to meet emis-

---

in-use standards (section 202(g)) and to order recall of motor vehicles not meeting those standards (section 207(c)(1)), further illustrating its intent that emissions reductions continue at all times during the actual life of motor vehicles. Also *see General Motors Corp. v. Ruckelshaus*, 742 F.2d 1561 (DC Cir. 1984) (finding that section 207(c)(1) enables EPA to order a recall of all motor vehicles in a class – even those beyond their statutory useful life – as long as EPA can demonstrate that those motor vehicles were not meeting their emissions standards while within their useful life.)

sion standards over its useful life to which it has been certified pursuant to section 206' mean the non-compliance of an engine or device with emission levels to which it was certified, taking into account the deterioration factors employed in certifying the engine.") This indicates that Congress was not trying to limit the scope of the waiver provision, but instead was using language normally used when referring to the emission standards. Congress wanted to ensure that new fuels or fuel additives allowed into the marketplace through a waiver would be the kinds of fuels or fuel additives that are consistent with motor vehicles meeting their applicable emissions standards.

In that context, EPA looks at whether the fuel or fuel additive would lead to an exceedance of the emissions standards if it was used during the motor vehicle's regulatory useful life. If that is the case, then the fuel should not be entered into commerce for use by that motor vehicle anytime during its actual life – just as the section 211(f)(1) prohibition ensures that motor vehicles will not use fuel or fuel additives anytime during their actual lives that are not substantially similar to the fuel or fuel additives used to certify their compliance with the emissions standards over their regulatory useful lives. This gives a reasonable meaning to the waiver provision and keeps it parallel and complementary to the section 211(f)(1) provision to which it is tied. EPA believes this reflects Congress' intention and avoids an unintended consequence that would be far at odds with the apparent purpose of sections 211(f)(1) and (4). If EPA were limited to only considering motor vehicles within their regulatory useful lives, this could require the Agency to approve waiver requests

for new fuels and fuel additives even if they were clearly known to seriously degrade emission control devices or systems and cause large emissions increases in older motor vehicles, which comprise a significant percentage of the entire fleet. Allowing such a detrimental fuel or fuel additive into the marketplace is clearly contrary to the purposes of section 211(f) which is designed as a whole to protect the benefits of the emissions control standards over the actual life of the motor vehicles.

X. Waiver Conditions

The conditions placed upon the partial waiver EPA is granting today fall into two categories. The first category concerns properties of the ethanol used to manufacture E15 and the properties of the final E15 blend. The second category of conditions concerns mitigation of potential misfueling with E15. Any party wishing to utilize this partial waiver for E15 must satisfy all of these conditions to be able to lawfully register and introduce E15, or ethanol used to make E15, into commerce.

A. Fuel Quality Conditions

As requested by Growth Energy in their waiver request application, and as is industry practice, the partial waiver for E15 contains a condition that requires use of ethanol which meets industry specifications as outlined in ASTM International D4806.[142] Additionally, as discussed above in our evaluation of the potential effect of E15 on evaporative emissions, the partial waiver for E15 contains a condition that

---

[142] ASTM International D4806–10, Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel.

E15 must meet a maximum RVP of 9.0 psi during the summertime volatility season, May 1 through September 15.

B. Misfueling Mitigation Conditions and Strategies

EPA believes that minimizing the possibility of misfueling of E15 into vehicles or engines for which it is not approved would best be achieved through implementation of misfueling mitigation requirements as proposed by EPA today in a separate action. Nevertheless, EPA is allowing the use of the partial waiver prior to the finalization of such requirements provided the fuel or fuel additive manufacturer using the partial waiver can implement the conditions described below prior to introducing E15 into commerce. Any fuel or fuel manufacturer wishing to utilize this partial waiver must submit a plan for EPA approval for implementing these misfueling mitigation conditions. EPA will determine if the plan is sufficient to address these conditions.

We believe that there are four important components to an effective misfueling mitigation strategy for reducing the potential for misfueling with E15. First, effective labeling is a key factor. Labeling is needed to inform consumers of the potential impacts of using E15 in vehicles and engines not approved for its use, to mitigate the potential for intentional and unintentional misfueling of these vehicles and engines. Labeling is also done at the point of sale where the consumer most likely will be choosing which fuel to use. Second, retail stations and wholesale purchaser-consumers need assurance regarding the ethanol content of the fuel that they purchase so they can direct the fuel to the appropriate storage tank and properly label their fuel pumps. The use of

proper documentation in the form of PTDs has proven to be an effective means of both ensuring that retail stations know what fuel they are purchasing and as a possible defense for retail stations in cases of liability in the event of a violation of EPA standards. Third, labeling and fuel sampling surveys are necessary to ensure that retail stations are complying with labeling requirements, ethanol blenders are not blending more than the stated amount of ethanol on PTDs, and assuring downstream compliance for fuel refiners. The Agency has used this general strategy to implement several fuel programs over the past thirty years, including the unleaded gasoline program, the RFG program, and the diesel sulfur program. These strategies are conditions of use associated with today's waiver decision and are described below.

While not a condition of today's waiver decision, the fourth component of an effective misfueling mitigation strategy is effective public outreach and consumer education. Outreach to consumers and stakeholders is critical to mitigate misfueling incidents that can result in increased emissions and vehicle damage. Consumers need to be engaged through a variety of media to ensure that accurate information is conveyed to the owners and operators of vehicles and engines.

EPA recognizes that it may be difficult to fully implement all of these misfueling mitigation strategies prior to finalization of today's proposed rule. However, any fuel or fuel additive manufacturer wishing to introduce E15 into commerce before EPA finalizes its misfueling mitigation measures rule will need to demonstrate to EPA its ability to meet the following

misfueling mitigation conditions of the partial waiver:

1. Fuel Pump Dispenser Labeling

Any fuel or fuel additive manufacturer using this partial waiver must ensure the labeling of any dispensers of this gasoline-ethanol blend. The label would have to indicate that the fuel contains up to 15 vol% ethanol – that is, the fuel is gasoline containing greater than 10 vol% ethanol and up to 15 vol% ethanol.

Based on the Agency's experience with fuel pump labeling for Ultra-Low Sulfur Diesel (ULSD) and Low Sulfur Diesel (LSD) (see 40 CFR 80.570), there are four important elements to an effective label for misfueling. The language of the E15 label must contain four components: (1) An information component; (2) a legal approval component; (3) a technical warning component; and (4) a legal warning component. Together, these four components highlight the critical information necessary to inform consumers about the impacts of using E15.

The labeling requirements EPA is proposing today in a separate proposed rule concurrent with today's partial waiver decision would place labeling requirements on retail stations that dispense E15. Compliance with these labeling requirements, when finalized, will satisfy this fuel pump dispenser labeling condition. If a fuel or fuel additive manufacturer chooses to utilize this partial waiver prior to finalization of today's proposed rule, a label designed to meet the components described in today's proposed rule and approved by EPA can satisfy this fuel pump dispenser labeling condition of this partial waiver decision.

2. Fuel Pump Labeling and Fuel Sample Survey

Any fuel or fuel additive manufacturer using this partial waiver must participate in a survey, approved by EPA, of compliance at fuel retail facilities conducted by an independent surveyor. An EPA-approved survey plan is to be in place prior to introduction of E15 into the marketplace and the results of the survey must be provided to EPA for use in its enforcement and compliance assurance activities.

One of two options may be utilized to meet this condition of this partial waiver decision:

For Survey Option 1, a fuel or fuel additive manufacturer may individually survey labels and ethanol content at retail stations wherever its gasoline, ethanol, or ethanol blend may be distributed if it may be blended as E15. EPA must approve this survey plan before it is conducted by the fuel or fuel additive manufacturer.

For Survey Option 2, a fuel or fuel additive manufacturer may choose to conduct the survey through a nationwide program of sampling and testing designed to provide oversight of all retail stations that sell gasoline. Details of the survey requirements are similar to those included in the ULSD and RFG programs. A fuel or fuel additive manufacturer may conduct this survey as part of a consortium, as discussed in the proposed rule.

EPA is proposing more formal requirements for a national E15 labeling and ethanol content survey in today's notice of proposed rulemaking. If a fuel or fuel additive manufacturer chooses to utilize this partial waiver prior to finalization of today's proposed rule, a survey designed to satisfy the components described in today's proposed rule and ap-

proved by EPA will be deemed to be sufficient to satisfy this fuel pump labeling and fuel sample survey condition of this partial waiver decision.

3. Proper Documentation of Ethanol Content on Product Transfer Documents

Today's proposed rule would require that parties that transfer blendstocks, base gasoline for oxygenate blending, and/or finished gasoline that contains ethanol content greater than 10 vol% and no more than 15 vol% include the ethanol concentration of the fuel in volume percent. Product transfer documents (PTDs) are customarily generated and used in the course of business and are familiar to parties who transfer or receive blendstocks or base gasoline for oxygenate blending and oxygenated gasoline. Since we are approving a partial waiver for the introduction into commerce of E15 for use in only MY2007 and newer motor vehicles, the PTDs that accompany the transfer of base gasoline/gasoline blendstocks used for oxygenate blending and for oxygenated gasoline must include the ethanol content of the fuel to help avoid misfueling. Downstream of the terminal where ethanol blending takes place, information on the maximum ethanol concentration in the ethanol blend is needed to help ensure that fuel shipments are delivered into the appropriate storage tanks at retail and fleet gasoline dispensing facilities.[143] A gasoline retail station and fleet dispensing facility

---

[143] Evaluations are underway which may facilitate the shipment of gasoline-ethanol blends by pipeline to terminals. Hence, parties upstream of the terminal may need to include information on maximum ethanol concentration on product PTDs in the future.

must know the ethanol content of a fuel shipment so that fuel pumps may be correctly labeled.

In the event that there is a period of time when this partial waiver is utilized prior to finalization of today's proposal, a PTD program designed to satisfy the elements of today's proposed rule will be sufficient to satisfy the PTD condition of this partial waiver decision.

4. Public Outreach

While not a formal condition of this partial waiver, EPA recognizes the importance of outreach to consumers and stakeholders to misfueling mitigation. The potential for E15 misfueling incidents may exist for several reasons. For example, consumers may be inclined to misfuel when E15 costs less than E10 or E0. Additionally, in some situations, it may be more difficult to find fuels other than E15. EPA thus encourages fuel and fuel additive manufacturers to conduct a public outreach and education program prior to any introduction of E15 into commerce.

A recent example of outreach to consumers and stakeholders that may be applicable is coordinated work done in support of the ULSD program. ULSD was a new fuel with the possibility of consumer misfueling that could result in engine damage. With ULSD, the fuel industry trade association API took the lead in working with stakeholders to establish the Clean Diesel Fuel Alliance (CDFA), a collaboration of public and private organizations designed to ensure a smooth program transition by providing comprehensive information and technical coordination. The organizations represented in the CDFA include engine manufacturers, fuel retailers, trucking fleets, DOE and EPA. CDFA efforts to educate

ULSD users include developing technical guidance and educational information, including a Web site (*http://www.clean-diesel.org*), as well as serving as a central point of contact to address ULSD-related questions.

The CDFA outreach model could prove beneficial in this case. EPA anticipates that all parties involved in bringing higher gasoline-ethanol blends to market will participate in a coordinated industry-led consumer education and outreach effort. In the context of this program, potential key participants include ethanol producers, fuel and fuel additive manufacturers, automobile, engine and equipment manufacturers, States, non-governmental organizations, parties in the fuel distribution system, EPA, DOE, and USDA. Potential education and outreach activities a public/private group could undertake include serving as a central clearinghouse for technical questions about E15 and its use, promoting best practices to educate consumers or mitigate misfueling instances, and developing education materials and making them available to the public.

XI. Reid Vapor Pressure

Commenters questioned whether E15 would qualify for the 1.0 psi RVP waiver permitted for E10 under CAA section 211(h). As explained in the misfueling mitigation measures proposed rule, EPA interprets the 1.0 psi waiver in CAA section 211(h) as being limited to gasoline-ethanol blends that contain 10 vol% ethanol. Please see the preamble of that proposed rule for more discussion of this issue and for an opportunity to submit comments on this issue.

XII. Partial Waiver Decision and Conditions

Based on all the data and information described above, EPA has determined that, subject to compliance with all of the conditions below, a gasoline produced with greater than 10 vol% and no more than 15 vol% ethanol (E15) will not cause or contribute to a failure of certain motor vehicles to achieve compliance with their emission standards to which they have been certified over their useful lives.

Therefore, the waiver request application submitted by Growth Energy for its gasoline-ethanol blend with up to 15 vol% ethanol is partially and conditionally granted as follows:

(1) The partial waiver applies only to fuels or fuel additives introduced into commerce for use in MY2007 and newer light-duty motor vehicles, light-duty trucks, and medium duty passenger vehicles (hereafter "MY2007 and newer light-duty motor vehicles") as certified under Section 206 of the Act. The waiver does not apply to fuels or fuel additives introduced into commerce for use in pre-MY2007 motor vehicles, heavy-duty gasoline engines or vehicles, or motorcycles certified under section 206 of the Act, or any nonroad engines, nonroad vehicles, or motorcycles certified under section 213(a) of the Act.

(2) The waiver applies to the blending of greater than 10 vol% and no more than 15 vol% anhydrous ethanol into gasoline,[144] and the ethanol must meet

---

[144] Gasoline in this case may be gasoline blendstocks that produce gasoline upon the addition of the specified amount of ethanol covered by the waiver.

the specifications for fuel ethanol found in the ASTM International specification D4806–10.[145]

(3) The final fuel must have a Reid Vapor Pressure not in excess of 9.0 psi during the time period from May 1 to September 15.

(4) Fuel and fuel additive manufacturers subject to this partial waiver must submit to EPA a plan, for EPA's approval, and must fully implement that EPA-approved plan, prior to introduction of the fuel or fuel additive into commerce as appropriate. The plan must include provisions that will implement all reasonable precautions for ensuring that the fuel or fuel additive (i.e., gasoline intended for use in E15, ethanol intended for use in E15, or final E15 blend) is only introduced into commerce for use in MY2007 and newer motor vehicles. The plan must be sent to the following address: Director, Compliance and Innovative Strategies Division, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW. Mail Code 6405J, Washington, DC 20460. Reasonable precautions in a plan must include, but are not limited to, the following conditions on this partial waiver:

(a)(i) Reasonable measures for ensuring that any retail fuel pump dispensers that are dispensing a gasoline produced with greater than 10 vol% ethanol and no more than 15 vol% ethanol are clearly labeled for ensuring that consumers do not misfuel the waivered gasoline-ethanol blend into vehicles or engines

---

[145] ASTM D4806–10, Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel.

not covered by the waiver. The label shall convey the following information:

(A) The fuel being dispensed contains 15% ethanol maximum;

(B) The fuel is for use in only MY2007 and newer gasoline cars, MY2007 and newer light-duty trucks and all flex-fuel vehicles;

(C) Federal law prohibits the use of the fuel in other vehicles and engines; and

(D) Using E15 in vehicles and engines not approved for use might damage those vehicles and engines.

(ii) The fuel or fuel additive manufacturer must submit the label it intends to use for EPA approval prior to its use on any fuel pump dispenser.

(b) Reasonable measures for ensuring that product transfer documents accompanying the shipment of a gasoline produced with greater than 10 vol% ethanol and no more than 15 vol% ethanol properly document the volume of ethanol.

(c)(i) Participation in a survey of compliance at fuel retail dispensing facilities. The fuel or fuel additive manufacturer must submit a statistically sound survey plan to EPA for its approval and begin implementing the survey plan prior to the introduction of E15 into the marketplace. The results of the survey must be provided to EPA.[146] The fuel or fuel additive manufacturer conducting a survey may choose from either of the following two options:

---

[146] In a Notice of Proposed Rulemaking published in today's Federal Register, EPA is proposing a more detailed labeling, product transfer documents, and survey plan.

(ii) *Individual survey option*: Conduct a survey of labels and ethanol content at retail stations wherever your gasoline, ethanol, or ethanol blend may be distributed if it may be blended as E15. The survey plan must be approved by EPA prior to conducting the survey plan.

(iii) *Nationwide survey option*: Contract with an individual survey organization to perform a nationwide survey program of sampling and testing designed to provide oversight of all retail stations that sell gasoline. The survey plan must be approved by EPA prior to conducting the survey plan.

(d) Any other reasonable measures EPA determines are appropriate.

(5) Failure to fully implement any condition of this partial waiver means the fuel or fuel additive introduced into commerce is not covered by this partial waiver.

This partial waiver decision is final agency action of national applicability for purposes of section 307(b)(1) of the Act. Pursuant to CAA section 307(b)(1), judicial review of this final agency action may be sought only in the United States Court of Appeals for the District of Columbia Circuit. Petitions for review must be filed by January 3, 2011. Judicial review of this final agency action may not be obtained in subsequent proceedings, pursuant to CAA section 307(b)(2). This action is not a rulemaking and is not subject to the various statutory and other provisions applicable to a rulemaking.

Dated: October 13, 2010.

Lisa P. Jackson,

Administrator.

[FR Doc. 2010–27432 Filed 11–3–10; 8:45 am]
BILLING CODE 6560–50–P

APPENDIX 3

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OAR–2009–0211; FRL–9258–6]

Partial Grant of Clean Air Act Waiver Application Submitted by Growth Energy To Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Decision of the Administrator

Wednesday, January 26, 2011

AGENCY: Environmental Protection Agency.

ACTION: Notice of Decision Granting a Partial Waiver.

SUMMARY: The Environmental Protection Agency (EPA) is taking additional final action on Growth Energy's application for a waiver submitted under section 211(f)(4) of the Clean Air Act. Today's partial waiver allows fuel and fuel additive manufacturers to introduce into commerce gasoline that contains greater than 10 volume percent ethanol and no more than 15 volume percent ethanol (E15) for use in model year (MY) 2001 through 2006 light-duty motor vehicles (passenger cars, light-duty trucks and medium-duty passenger vehicles), if certain conditions are fulfilled. In October 2010, we granted a partial waiver for E15 for use in MY2007 and newer light-duty motor vehicles subject to the same conditions. Taken together, the two waiver decisions allow the introduction into commerce of E15 for use in MY2001 and newer light-duty motor vehicles if those conditions are met.

[CONTENT OMITTED]

I. Executive Summary

A. Prior E15 Partial Waiver Decision

In March 2009, Growth Energy and 54 ethanol manufacturers petitioned the Environmental Protection Agency (EPA or Agency) to allow the introduction into commerce of up to 15 volume percent (vol%) ethanol in gasoline. Prior to Growth Energy's petition, ethanol was limited to 10 vol% in motor vehicle gasoline (E10). The petition requested that EPA exercise its authority under section 211(f)(4) of the Clean Air Act (CAA or Act) to waive the prohibition on the introduction of E15 into commerce under section 211(f)(1) of the Act. In April 2009, EPA invited public comment on Growth Energy's waiver request and received about 78,000 comments. On October 13, 2010, EPA took two actions on the waiver request based on the information available at that time ("October Waiver Decision").[1] First, it partially approved Growth Energy's waiver request to allow the introduction of E15 into commerce for use in MY2007 and newer light-duty motor vehicles, subject to several conditions. Second, the Agency denied the waiver request for MY2000 and older light-duty motor vehicles, heavy- duty gasoline engines and vehicles, highway and off-highway motorcycles, and other nonroad engines, vehicles, and equipment. The Agency also deferred making a decision on the waiver request for MY2001–2006 light- duty motor vehicles to await the results of additional testing being conducted by the Department of Energy (DOE).

---

[1] *Partial Grant and Partial Denial of CAA Waiver Application Submitted by Growth Energy to Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Decision of the Administrator*. *See* 75 FR 68094, November 4, 2010.

B. Waiver Decision for MY2001–2006 Light-Duty Motor Vehicles

In today's action, EPA is partially granting Growth Energy's waiver request for MY2001–2006 light-duty motor vehicles based on our analysis of the available information, including DOE and other test data and public comments. This partial grant waives the prohibition on fuel and fuel additive manufacturers and allows the introduction into commerce of gasoline containing greater than 10 vol% ethanol and no more than 15 vol% ethanol for use in MY2001–2006 light-duty motor vehicles, which includes passenger cars, light-duty trucks, and medium-duty passenger vehicles (large sport utility vehicles).[2] It is subject to the same conditions that apply to the partial waiver issued in October for MY2007 and newer light-duty motor vehicles. Today's waiver decision together with the October Waiver Decision means that E15 may be introduced into commerce, subject to those conditions, for use in all MY2001 and newer light-duty motor vehicles.[3]

---

[2] For purposes of today's decision, "MY2001– 2006 light-duty motor vehicles" include MY2001– 2006 light-duty vehicles (LDV), light-duty trucks (LDT), and medium-duty passenger vehicles (MDPV), the same types of motor vehicles as in the October Waiver Decision, but for the earlier model years 2001–2006.

[3] It should be noted that a number of additional steps must be completed by various parties before E15 may be distributed and sold. These steps include but are not limited to submission of a complete E15 fuels registration application by the fuel and fuel additive manufacturers who wish to introduce E15 into commerce, and EPA review and approval of the application, under the regulations at 40 CFR Part 79. Various state laws may also affect the distribution and sale

To receive a waiver under CAA section 211(f)(4), a fuel or fuel additive manufacturer must demonstrate that a new fuel or fuel additive will not cause or contribute to the failure of engines or vehicles to achieve compliance with the emission standards to which they have been certified over their useful life. The information submitted by Growth Energy was not sufficient to support a waiver covering introduction of E15 into commerce for use in MY2001–2006 light-duty motor vehicles. However, key data for responding to the waiver request for MY2001–2006 light-duty motor vehicles was provided by a DOE test program to determine the effect of long-term use of gasoline-ethanol blends, including E15, on the durability of emissions control systems, including catalysts, used in light-duty motor vehicles to control exhaust emissions (DOE Catalyst Study).[4]

In 2008, DOE began testing 19 MY2007 and newer light-duty motor vehicle models, and the resulting test data were an important part of the basis for EPA's October Waiver Decision, which granted a partial waiver for use of E15 in those model year and newer motor vehicles. In 2010, DOE began a second phase of its study with eight motor vehicle models to provide emissions-related data for MY2001– 2006 light-duty motor vehicles. Many of the models were

---

of E15.

[4] DOE embarked on the study, in consultation with EPA, auto manufacturers, fuel providers and others, after enactment of the Energy Independence and Security Act of 2007, which significantly expanded the federal Renewable Fuel Standard program by increasing the volume of renewable fuels that must be used in transportation fuel in order to reduce imported petroleum and emissions of greenhouse gases.

selected for their expected sensitivity to the effects of long-term use of higher gasoline-ethanol blends, such as E15, so that any potential emissions problems would be more likely to become apparent. The test fleet also included several high- sales volume vehicle models. As a whole, the test fleet was appropriately composed to provide important information for assessing the potential impact of E15 on emissions of MY2001– 2006 light-duty motor vehicles.

In view of the ongoing DOE Catalyst Study, the Agency delayed making a decision on the waiver request for MY2001–2006 light-duty motor vehicles until the test program was completed and the results made available to the public. DOE testing was largely completed in November, and retesting of several models that experienced mechanical problems unrelated to fuel use was completed in December. The test results were made available to the public on a rolling basis, with EPA submitting data to the docket as soon as the data were received and checked for accuracy and completeness with DOE.

As described more fully in Section IV of this notice, EPA is making today's decision based on the results of the DOE Catalyst Study and other relevant test programs, as well as the Agency's engineering assessment that changes in regulatory requirements affecting MY2001–2006 light-duty motor vehicles generally led manufacturers to design and build vehicles able to use E15 without a significant impact on emissions. Consistent with past waiver decisions, the Agency is making its decision based on potential effects of E15 in four areas: (1) Exhaust emissions – immediate [5] and long-term (known as durability);

[5] In past waiver decisions, we have referred to "immediate"

(2) evaporative emissions – immediate and long-term; (3) the impact of materials compatibility on emissions; and (4) the impact of driveability and operability on emissions.

For MY2001–2006 light-duty motor vehicles, EPA concludes that the DOE Catalyst Study, other information and EPA's engineering analysis adequately demonstrate that the impact of E15 on overall exhaust emissions, including both immediate and long-term, will not cause or contribute to violations of the exhaust emissions standards for these motor vehicles. All but one of the vehicles that completed DOE testing met exhaust emission standards on average after the vehicles accumulated significant mileage, and were then tested, on E15. Although one vehicle tested on E15 slightly exceeded one emission standard, the exceedance does not appear related to fuel use since its counterpart tested on E0 (gasoline containing no ethanol) exceeded the same standard. Compliance with emission standards by the E15 test fleet as a whole is particularly compelling given that the vehicles tested were older, high mileage vehicles (reflecting their model year), and much of the testing was conducted at mileages beyond the vehicles' regulatory "full useful life" (FUL) of 100,000–120,000 miles, depending on vehicle type and model year. The test results also show that the vehicles aged and tested on E15 did not have significantly higher emissions than the vehicles aged and tested on E0, and some vehicles' emissions actually decreased on E15. Overall, the test results for MY2001– 2006 are similar to the DOE test results for MY2007 and newer

---

emissions as "instantaneous" emissions. "Immediate" and "instantaneous" are synonymous in this context.

light-duty motor vehicles, indicating that the earlier model year vehicles are more like later model year vehicles in their ability to maintain emission control performance when operated on E15. The DOE test results thus strongly confirm EPA's engineering assessment that auto manufacturers responded to regulatory changes applicable to MY2001–2006 with design changes that made light-duty motor vehicles capable of maintaining exhaust emissions performance when operated on mid- level gasoline-ethanol blends, up to and including E15.

With respect to evaporative emissions, EPA concludes that analysis of test data and other available information and the Agency's engineering assessment adequately demonstrate for purposes of CAA section 211(f)(4), with the possible limited exception noted below, that the impact of E15 on overall evaporative emissions, including both immediate and durability-related, will not cause or contribute to MY2001–2006 light-duty motor vehicles exceeding their applicable evaporative emissions standards, so long as the fuel does not exceed a Reid Vapor Pressure (RVP) of 9.0 psi in the summertime volatility control season.[6] Analysis of available information suggests, but does not establish, the possibility that a limited number of vehicle models with emissions already very close to applicable evaporative emission standards might exceed the standards in-use if oper-

[6] EPA regulates the Reid Vapor Pressure of gasoline sold at retail stations during the summer ozone season (June 1 to September 15) to reduce evaporative emissions from gasoline that contribute to ground-level ozone. Gasoline needs a higher vapor pressure in the wintertime for cold start purposes.

ated on E15. However, this possibility should be considered in light of information indicating that use of E15 by those vehicles will, overall, be better for the environment with respect to in- use evaporative emissions than would otherwise occur if a waiver were not granted. In fact, E15 may result in somewhat lower in-use evaporative emissions compared to fuel currently sold in almost all of the country (E10), as a result of differences in the allowable RVP of the two gasoline- ethanol blends. As such, the possibility of a limited number of evaporative emission exceedances, under these somewhat unique circumstances, does not warrant denial of the request for a waiver with respect to these model year vehicles. Available information on materials compatibility and driveability also supports a partial waiver for MY2001–2006 light-duty motor vehicles. Further information and explanation concerning each of these findings are provided later in this notice.

C. Conditions on Today's Partial Waiver and Proposed Rule on Misfueling Mitigation

Like the waiver for MY2007 and newer light-duty motor vehicles, today's partial waiver is subject to several conditions to ensure fuel quality, limit the fuel's summertime vapor pressure, and mitigate the potential for other vehicles, engines and products to be misfueled with E15. Specifically, EPA is placing two types of conditions on the partial waiver granted today: (1) Those for mitigating the potential for misfueling of E15 in all vehicles, engines and equipment for which E15 is not approved; and (2) those addressing fuel and ethanol quality. All of the conditions are discussed in Section X of the October Waiver Decision (*see* 75 FR 68094, 68148 (November 4,

2010)) and are listed below in Section IV. EPA is applying the same conditions on introduction of E15 into commerce for use in MY2001–2006 light-duty motor vehicles that it applied to use of E15 in MY2007 and newer such vehicles, and for the same reasons, as explained in the October Waiver Decision. To meet the misfueling-related conditions, any fuel or fuel additive manufacturer subject to this waiver must obtain EPA approval of and implement a plan that meets the conditions for ensuring that the fuel or fuel additive is only introduced into commerce for use in MY2001 and newer light-duty motor vehicles, and not for use in other on- and off-road vehicles, engines and equipment for which E15 is not approved. See Section VI below.

To help ensure that E15 is used only in motor vehicles for which it is approved, EPA issued a notice of proposed rulemaking (NPRM) published concurrently with the October Waiver Decision ("Misfueling Mitigation NPRM," 75 FR 68044, November 4, 2010). In that NPRM, EPA proposed

safeguards to provide the most practical way to mitigate the potential for misfueling of other vehicles, engines and equipment with E15. The Agency received many comments in response to the NPRM, particularly with regard to the proposed misfueling mitigation measures. EPA is now in the process of considering those comments in developing final mitigation measures so that vehicles, engines and products are appropriately fueled if E15 is introduced into commerce. As noted above, today's waiver decision authorizes, but does not require, E15 to be introduced into commerce (subject to several conditions), and a number of additional steps must be tak-

en before that occurs. In addition, any significant shift in the marketplace from E10 to E15 will take time as producers, distributors and suppliers make the necessary adjustments. EPA is developing a program of misfueling mitigation measures that would work in tandem with the various steps involved in distributing and marketing E15 so that needed safeguards are timely and effective.

EPA expects that the mitigation measures that are adopted would satisfy the misfueling mitigation conditions of the partial waiver decision issued in October and today, and would promote the successful introduction of E15 into commerce. In addition to the misfueling mitigation conditions, E15 and the ethanol used to make E15 must also meet certain fuel and fuel additive quality specifications before it may be introduced into commerce.

II. Introduction

Section II of the October Waiver Decision includes a comprehensive review of the relevant CAA provisions and the amendments made to those provisions by the Energy Independence and Security Act of 2007. It also describes Growth Energy's waiver application and the public review process that EPA conducted as part of its consideration of the application. Today's partial waiver decision fully incorporates by reference Section II of the October Waiver Decision and provides additional information as needed to address the potential use of E15 in MY2001–2006 light-duty motor vehicles.

[CONTENT OMITTED]

IV. Analysis for MY2001-2006 Light-Duty Motor Vehicles

As described in detail below, DOE and other test data together with other available information and EPA's engineering analysis support granting a partial waiver for use of E15 in MY2001-2006 light-duty motor vehicles. As with EPA's waiver decision for MY2007 and newer light-duty motor vehicles, the DOE Catalyst Program provided critically important test data for assessing the ability of MY2001-2006 light-duty motor vehicles to meet applicable exhaust emission standards if operated on E15. DOE's test fleet was carefully assembled to be broadly representative of the national fleet for those model years and to discern any emission problems that might arise from use of E15. Results from DOE's testing strongly support a determination that E15 will not cause or contribute to MY2001-2006 light-duty motor vehicles exceeding their applicable exhaust emission standards. Analysis of other test data, including EPA compliance information, combined with EPA's engineering assessment shows that MY2001-2006 light-duty motor vehicles should generally be able to meet evaporative emission standards when operated on E15 so long as the fuel does not exceed a RVP of 9.0 psi in the summertime volatility control season. In fact, such vehicles should have somewhat lower evaporative emissions when operated on 9.0 psi E15 than when operated on currently available in-use fuel. Although our analysis suggests the possibility that a relatively small number of vehicles already emitting at close to applicable evaporative emission standards may exceed those standards on E15, that possibility does not warrant denial of the waiver, particularly in light of the evaporative emission ben-

efits that 9.0 psi E15 is expected to achieve in comparison to commercially available in-use fuel.[11]

[CONTENT OMITTED]

Since Tier 2 standards began to phase in with MY2004, many MY2004-2006 light-duty motor vehicles are subject to Tier 2 standards. Indeed, as illustrated by Figure IV.A-1, more than 60% of MY2005, and more than 80% of MY2006, light-duty motor vehicles are certified as complying with Tier 2 standards. EPA's reasons for partially granting the waiver with respect to MY2007 and newer light-duty motor vehicles also apply to MY2004-2006 Tier 2 vehicles. However, in its October Decision, EPA did not grant the partial waiver with respect to MY2004-2006 Tier 2 vehicles because the Agency expected most vehicle owners for those model years would not know what

---

[11] As explained later in this notice, EPA has traditionally interpreted and applied CAA section 211(f)(4) to authorize a waiver for fuels or fuel additives that statistical analysis shows will not result in a significant increase in violations of the vehicle emissions standards. Even if EPA were to adopt a more stringent test for waiver decisions, it would not apply such a test in these circumstances, where the actual environmental impact of the fuel is neutral or positive. In the unique circumstances here, the potential emissions violation should not be considered significant, given their actual impact on in-use emissions is neutral or even positive. Also, since the EPA regulations for determining auto manufacturers' compliance with emission standards specify use of E0 fuel during compliance testing, manufacturers' compliance status will not be adversely affected by any emission failures that might occur in-use as the result of any immediate emissions impacts of E15.

emission standards their vehicles are supposed to meet, and that information is not easily discerned from the vehicle itself. EPA thus decided to use a model year cut-off for delineating which model years were covered by the partial waiver. For purposes of today's decision, though, it is important to note that MY2004-06 vehicles certified to Tier 2 standards should be able to use E15 without adverse impacts on their emissions for the reasons given in the October Waiver Decision. The analysis in today's decision focuses on light-duty motor vehicles that are not certified to Tier 2 standards.

A. Exhaust Emissions

[CONTENT OMITTED]

ii. DOE Catalyst Study Results

As noted above, the results from the DOE Catalyst Study for MY2001-2006 light-duty motor vehicles confirm the engineering analysis that long-term use of E15 is not expected to lead to significant emissions increases or contribute to those vehicles exceeding their exhaust emission standards over their FUL. Emission test results and the applicable emission standards [24] for the vehicles aged on E0 ("E0 vehicles") and the vehicles aged on E15 ("E15 vehicles") at the start, middle, and end of the test program are shown in Tables IV.A-2 and 3. There were no trends

---

[24] Total hydrocarbons (THC), non-methane hydrocarbons (NMHC), non-methane organic gases (NMOG), nitrogen oxides (NOx), and carbon monoxide (CO).

or patterns that appeared fuel related. No significant increases in long-term exhaust emissions were observed with the E15 vehicles. Furthermore, the test results show that the vehicles aged and tested on E15 did not have significantly higher emissions than the vehicles aged and tested on E0, and some vehicles' emissions actually decreased on E15. Overall, the exhaust emission test results across test vehicles were generally similar with regard to deterioration and failure rates to the test results observed for the Tier 2 vehicle test fleet (which included some MY2005 and 2006 motor vehicles) and discussed in the October Waiver Decision.

All E15 vehicles except one were below their emissions limits at the end of the test. One E15 vehicle exceeded its nonmethane organic gas (NMOG) emissions limits at the end of the test program. The vehicle, a 2000 Honda Accord, was just above its FUL NMOG standard after 50,000 miles of aging.[25] The exceedance of the NMOG standard did not appear to be related to E15 since the NMOG emissions of the E0 counterpart motor vehicle also exceeded the standard after only 25,000 miles of aging. Two other E0 motor vehicles (2003 Chevy Cavalier and 2003 Toyota Camry) also failed the NMOG standard but their E15 counterpart did not.

---

[25] In general, EPA may take action to compel a manufacturer to recall and remedy a problem after determining that a substantial number of properly maintained and operated vehicles fail to conform to EPA standards in actual use. EPA will use the information from the DOE test program to help it identify future vehicle test classes as part of its overall vehicle compliance program.

All motor vehicles except for the E0 Accord were below their carbon monoxide (CO) emissions limits at the end of the test. One end-of-test program data point for the E15 Frontier was over the standard but the test point average was well below the standard. All motor vehicles were below their oxides of nitrogen (NOX) emissions limits at the end of the test program.

Testing of older motor vehicles did pose challenges since they had relatively high mileages and their maintenance and driving histories were not well known. As a result, test results for these motor vehicles showed greater variability than the results for the newer motor vehicles of the Tier 2 test fleet. There were also mechanical issues to address during mileage accumulation. Considering the higher variability expected in this situation, there were generally small changes in emissions (both increases and decreases) with mileage accumulation for most of the motor vehicles (with the exception of the Honda Accord samples) with no indication of significant deterioration of the exhaust emission control system, including the catalyst, due to E15.[26] The relative dura-

---

[26] The exhaust emissions of some vehicles actually decreased over the course of the testing program. There are a few possible reasons for this result. For example, "TOP TIER Detergent Gasoline" was used during the aging cycles. With unknown aging conditions and fuel quality prior to the testing and mileage accumulation, some vehicles may have become cleaner between the start of the test and the midpoint of the test due to the detergent additives in the aging fuel. In addition, the standard Road Cycle used for the mileage accumulation may have helped restore catalyst activity in some vehicles if they were never driven hard enough (high speed and/or high load) during previous aging.

bility of exhaust emissions control performance is particularly notable given the high mileage of the test vehicles at the end of testing. The results from the DOE test program thus provide compelling support for the conclusion that the long-term use of E15 will not cause or contribute to MY2001-2006 light-duty motor vehicles exceeding their exhaust emission standards over their FUL.

Table IV.A-2—Emission Test Results Compared to the Respective Certification Standards at Start, Middle, and End of Test

Year	Make	Model	Cert Standard	THC	NMHC	NMOG	CO	NOx
E15 Start of Test Program Pass/Fail Results								
2002	Nissan	Frontier	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2002	Dodge	Durango	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass
2003	Chevy	Cavalier	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2003	Ford	Taurus	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2003	Toyota	Camry	ULEV	N/A	N/A	Pass	Pass	Pass
2000	Ford	Focus	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2000	Honda	Accord	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2000	Chevy	Silverado	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass
E15 Middle of Test Program Pass/Fail Results								
2002	Nissan	Frontier	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2002	Dodge	Durango	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass

Table IV.A-2—Emission Test Results Compared to the Respective Certification Standards at Start, Middle, and End of Test

Year	Make	Model	Cert Standard	THC	NMHC	NMOG	CO	NOx
2003	Chevy	Cavalier	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2003	Ford	Taurus	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2003	Toyota	Camry	ULEV	N/A	N/A	Pass	Pass	Pass
2000	Ford	Focus	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2000	Honda	Accord	NLEV (LEV)	N/A	N/A	Pass*	Pass	Pass
2000	Chevy	Silverado	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass
E15 End of Test Program Pass/Fail Results								
2002	Nissan	Frontier	NLEV (LEV)	N/A	N/A	Pass	Pass*	Pass
2002	Dodge	Durango	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass
2003	Chevy	Cavalier	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2003	Ford	Taurus	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2003	Toyota	Camry	ULEV	N/A	N/A	Pass	Pass	Pass
2000	Ford	Focus	NLEV (LEV)	N/A	N/A	Pass	Pass	Pass
2000	Honda	Accord	NLEV (LEV)	N/A	N/A	Fail	Pass	Pass
2000	Chevy	Silverado	Tier 1/LDT3	Pass	Pass	N/A	Pass	Pass

[CONTENT OMITTED]

As noted above, the vehicles tested in the CRC programs represent a broad cross-section of the national light-duty motor vehicle fleet, so our analysis indicates that most MY2001-2006 light-duty motor vehicles would still meet applicable evaporative emission standards if operated on E15. However, the test programs were not fully representative as they included no General Motors models or larger light-duty trucks. Thus, there may be some vehicles in the fleet with smaller compliance margins such that the impact of permeation could increase their total evaporative emissions beyond the standard to which they were certified.

Even if a small number of vehicle models might exceed evaporative emission standards in-use when operated on E15, we believe that a waiver is appropriate for two reasons. One, any increase in evaporative emission standard exceedances is expected to be limited since all the CRC motor vehicles tested continued to meet their evaporative emission standards and those motor vehicles represent a large segment of the national fleet. In past waiver decisions, EPA has applied statistical tests that are failed if the fuel or fuel additive being considered would increase the number of motor vehicles exceeding their emissions standard by a significant amount. For example, see the discussion of the Petrocoal Waiver in *MVMA v. EPA*, 768 F.2d 385, 399 (DC Cir. 1985) ("Petrocoal Waiver, 46 FR at 48,978. The Deteriorated Emissions Test is designed to provide a 90 percent probability of failure of the test if 25 percent or more of the vehicle

fleet tested would fail to meet emission standards using the waiver fuel or fuel additive."). This was based on EPA's longstanding interpretation that the criteria in CAA section 211(f)(4) could be met where a fuel or fuel additive would not cause or contribute to a "significant" number of motor vehicles in the national fleet failing their emission standards. See *MVMA*, 768 F.2d at 391 ("This burden, which Congress has imposed on the applicant, if interpreted literally, is virtually impossible to meet as it requires proof of a negative proposition, i.e., that no vehicle will fail to meet emission standards with respect to which it has been certified. Taken literally, it would require the testing of every vehicle. Recognizing that Congress contemplated a workable waiver provision, mitigation of this stringent burden was deemed necessary. For purposes of the waiver provision, EPA has previously indicated that reliable statistical sampling and fleet testing protocols may be used to demonstrate that a fuel under consideration would not cause or contribute to a significant failure of emission standards by vehicles in the national fleet.") The statistical tests used by EPA were intended to identify failures of a statistically significant number of motor vehicles resulting from the fuel or fuel additive itself as opposed to other non-fuel related causes. Consequently, the statistical tests do not bar a waiver for a fuel or fuel additive that would increase the number of motor vehicles exceeding their applicable emission standards by an amount smaller than the statistical tests were designed to confidently discern. While EPA is not applying those statistical tests in this case, they represent the Agency's past judgment that a possible increase in a limited number of motor vehicles exceeding their applicable emission standards

is not necessarily a basis for denying a waiver request.

In this case, the CRC test data indicate that the large majority of MY2001-2006 vehicle models have compliance margins adequate to meet their evaporative emissions standard when operated on E15. EPA's engineering assessment is that the degree of control of permeation emissions from E15 exhibited in the CRC test programs (although less than the degree of control exhibited by Tier 2 vehicles) and the size of compliance margins likely result in large part from the response to EPA's regulatory changes discussed above. Manufacturers were improving their evaporative emissions systems so they would be more effective at controlling evaporative emissions from in-use fuels, including fuels containing ethanol. The regulatory changes also generally applied to the kinds of vehicles not included in the CRC test program, so similar levels of permeation emission control and compliance margins could also be expected in those vehicles. There is thus the possibility of, at most, limited emission standard exceedances in the MY2001-2006 light-duty motor vehicle fleet with the use of E15, considering the results of the CRC test programs, EPA's analysis using the compliance margins of those vehicles, and the expectation of similar emissions levels and compliance margins for other MY2001-2006 vehicles. This judgment is based on all of the information before the Agency, including the engineering assessment discussed above.

A second reason that a waiver is appropriate in this case is that the environment would likely benefit from, and in any event would not be harmed by, the impact of E15 use on evaporative emissions of

MY2001-2006 light-duty motor vehicles. As explained in the Misfueling Mitigation NPRM, E10 is now the pervasive fuel in the national motor vehicle fuel market. The use of E10 already results in some permeation increases, resulting from its ethanol content, and E15 would cause no greater permeation emissions than E10. As a result, permeation emissions from the use of E15 should not lead to any actual increase in exceedances of the evaporative emissions standards in the in-use fleet of MY2001-2006 light-duty motor vehicles compared to no use of E15. In addition, as a result of the CAA's 1 psi waiver for E10, the use of E10 results in significant additional evaporative emissions from canister breakthrough, resulting from the fuel's higher volatility at 10.0 psi RVP. Since a waiver for E15 would not allow RVP greater than 9.0 psi, the lower volatility of E15 would lead to significantly lower evaporative emissions than would otherwise result from canister breakthrough with E10. To the extent it is used in the marketplace, E15 would likely replace the use of E10.[35] Therefore, its use would likely benefit, and would not harm, the environment by reducing in-use vehicle evaporative emissions.[36] In these somewhat unique circumstances, EPA believes that any limited

---

[35] E10 is already the predominant gasoline fuel in most of the country and it is reasonable to assume that, if and when E15 is introduced into the marketplace, it would be in a market where fuel ethanol is already available and sold as E10.

[36] E15 use would also not affect vehicle manufacturers' compliance status since in-use testing for recall and other regulatory purposes is conducted on E0 fuel, and any effect of E15 on immediate evaporative emissions is transient and would not affect results of compliance testing on E0 fuel.

number of motor vehicles exceeding their evaporative emission standards when using E15 should not be considered significant for purposes of determining whether to grant a waiver under section 211(f)(4).[37]

[CONTENT OMITTED]

C. Materials Compatibility

[CONTENT OMITTED]

1. Growth Energy's Submission and Public Comment Summary

[CONTENT OMITTED]

---

[37] It is important to note that the relevant comparison for evaluating whether a fuel or fuel additive will have an impact on failures of emission standards is a comparison between the proposed fuel or additive (here E15) and the fuel on which vehicles are tested for purposes of determining auto manufacturers' compliance with emission standards (E0). While E15 may result in limited additional exceedances of evaporative emission standards in comparison to E0, it will reduce actual in-use evaporative emissions compared to E10, the fuel it is expected to replace. We believe it is appropriate to consider both E15's limited potential for increasing exceedances of standards when compared to E0 fuel, and this real-world evaporative emissions benefit of E15 in considering the significance of any such exceedances, in deciding whether to grant a waiver for E15 use in MY2001-2006 light-duty motor vehicles.

2. EPA Analysis and Conclusions

The Agency has reviewed the studies that have shown generally acceptable materials compatibility in newer motor vehicles with ethanol up to 10 vol%, but degradation of certain metals, elastomers, plastics, and vehicle finishes with higher dosages.[39] However, most of these studies, including the Minnesota Compatibility Study, were on component parts using laboratory bench tests rather than durability studies of whole vehicle fuel systems simulating real-world vehicle use. In addition, there is no way to correlate the results of the study with MY2001-2006 motor vehicles. Many different materials were used over the years and we do not have data that shows which manufacturers used which specific materials at various points in time.

As the Agency noted in the October Waiver Decision, newer motor vehicles, including NLEVs, were designed to encounter more regular ethanol exposure compared to earlier model year motor vehicles. The Agency believes that the CAP2000 in-use testing and durability demonstration requirements as well as the introduction of OBD leak detection monitors and enhanced evaporative emission test procedures have led manufacturers to design vehicles using materials that will continue to function properly with respect to evaporative emissions when ethanol blends are used. This includes materials compatible with long-term use of ethanol blends, as the standards apply for the useful life of the vehicle, and the IUVP test program and the OBD leak detection requirement

---

[39] SAE J1297, revised July, 2007, Surface Vehicle Information Report, Alternative Fuels.

monitor compliance throughout the useful life. As discussed in the long-term evaporative emissions section of this notice, data from IUVP, EPA's in-use surveillance program, and manufacturer emission defect information reports have not detected any failures attributable to ethanol up to E10. Based on the Agency's engineering judgment and this supplemental information, and the generally large evaporative emissions compliance margin for these vehicles, EPA does not expect that there will be materials compatibility issues with E15 that would cause MY2001-2006 light-duty motor vehicles to exceed their evaporative emission standards over their FUL. For exhaust emissions, the same kind of information supports the same conclusion. In addition, the results of the DOE Catalyst Study support this conclusion, as E15 was used for long-term aging of the vehicles and the Study did not uncover any emissions deterioration problems with E15 in comparison to E0 that would result in materials compatibility issues.

D. Driveability and Operability

[CONTENT OMITTED]

V. Legal Issues Arising In This Partial Waiver Decision

We fully incorporate by reference Section IX of the October Waiver Decision into this decision. Section IX, entitled "Legal Issues Arising in This Partial Waiver Decision," presents discussion regarding legal issues arising from issuing these partial waiver deci-

sions. We incorporate that discussion here as our rationale is the same for this decision.

VI. Waiver Conditions

We fully incorporate by reference Section X of the October Waiver Decision into this decision. Section X, entitled "Waiver Conditions," provides a more detailed explanation regarding the conditions placed on these partial waiver decisions. We incorporate that discussion here as our rationale is the same for this decision.

VII. Partial Waiver Decision and Conditions

Based on all the data and information described above and in the October Waiver Decision, the waiver request application submitted by Growth Energy for its gasoline-ethanol blend with up to 15 vol% ethanol is partially and conditionally granted as follows:

(1) The partial waiver applies only to fuels or fuel additives introduced into commerce for use in MY2001 and newer light-duty motor vehicles, light-duty trucks, and medium duty passenger vehicles (hereafter "MY2001 and newer light-duty motor vehicles") as certified under Section 206 of the Act. The waiver does not apply to fuels or fuel additives introduced into commerce for use in pre-MY2001 motor vehicles, heavy-duty gasoline engines or vehicles, or motorcycles certified under section 206 of the Act, or any nonroad engines, nonroad vehicles, or motorcycles certified under section 213(a) of the Act.

(2) The waiver applies to the blending of greater than 10 vol% and no more than 15 vol%

anhydrous ethanol into gasoline,[40] and the ethanol must meet the specifications for fuel ethanol found in the ASTM International specification D4806–10.[41]

(3) The final fuel must have a Reid Vapor Pressure not in excess of 9.0 psi during the time period from May 1 to September 15.

(4) Fuel and fuel additive manufacturers subject to this partial waiver must submit to EPA a plan, for EPA's approval, and must fully implement that EPA-approved plan, prior to introduction of the fuel or fuel additive into commerce as appropriate. The plan must include provisions that will implement all reasonable precautions for ensuring that the fuel or fuel additive (*i.e.* gasoline intended for use in E15, ethanol intended for use in E15, or final E15 blend) is only introduced into commerce for use in MY2001 and newer light-duty motor vehicles. The plan must be sent to the following address: Director, Compliance and Innovative Strategies Division, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Mail Code 6405J, Washington, DC 20460.

Reasonable precautions in a plan must include, but are not limited to, the following conditions on this partial waiver:

---

[40] Gasoline in this case may be gasoline blendstocks that produce gasoline upon the addition of the specified amount of ethanol covered by the waiver.

[41] ASTM International D4806–10, Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for Use as Automotive Spark-Ignition Engine Fuel.

(a)(i) Reasonable measures for ensuring that any retail fuel pump dispensers that are dispensing a gasoline produced with greater than 10 vol% ethanol and no more than 15 vol% ethanol are clearly labeled for ensuring that consumers do not misfuel the waivered gasoline-ethanol blend into vehicles or engines not covered by the waiver. The label shall convey the following information:

(A) The fuel being dispensed contains 15% ethanol maximum;

(B) The fuel is for use in only MY2001 and newer gasoline cars, MY2001 and newer light-duty trucks and all flex-fuel vehicles;

(C) Federal law prohibits the use of the fuel in other vehicles and engines; and

(D) Using E15 in vehicles and engines not approved for use might damage those vehicles and engines.

(ii) The fuel or fuel additive manufacturer must submit the label it intends to use for EPA approval prior to its use on any fuel pump dispenser.

(b) Reasonable measures for ensuring that product transfer documents accompanying the shipment of a gasoline produced with greater than 10 vol% ethanol and no more than 15 vol% ethanol properly document the volume of ethanol.

(c)(i) Participation in a survey of compliance at fuel retail dispensing facilities. The fuel or fuel additive manufacturer must submit a statistically sound survey plan to EPA for its approval and begin implementing the survey plan prior to the introduction of E15 into the marketplace. The results of the survey

must be provided to EPA.[42] The fuel or fuel additive manufacturer conducting a survey may choose from either of the following two options:

(ii) *Individual survey option:* Conduct a survey of labels and ethanol content at retail stations wherever your gasoline, ethanol, or ethanol blend may be distributed if it may be blended as E15. The survey plan must be approved by EPA prior to conducting the survey plan.

(iii) *Nationwide survey option:* Contract with an individual survey organization to perform a nationwide survey program of sampling and testing designed to provide oversight of all retail stations that sell gasoline. The survey plan must be approved by EPA prior to conducting the survey plan.

(d) Any other reasonable measures EPA determines are appropriate.

(5) Failure to fully implement any condition of this partial waiver means the fuel or fuel additive introduced into commerce is not covered by this partial wavier.

These conditions are the same as those provided in the October partial waiver for MY2007 and newer light- duty motor vehicles. They have been modified here only to reflect the combined model years covering MY2001 and newer.

This partial waiver decision is final agency action of national applicability for purposes of section

---

[42] In a Notice of Proposed Rulemaking published on November 4, 2010 in the **Federal Register** (*see* 75 FR 68044), EPA proposed a more detailed labeling, product transfer documents, and survey plan.

307(b)(1) of the Act. Pursuant to CAA section 307(b)(1), judicial review of this final agency action may be sought only in the United States Court of Appeals for the District of Columbia Circuit. Petitions for review must be filed by March 28, 2011. Judicial review of this final agency action may not be obtained in subsequent proceedings, pursuant to CAA section 307(b)(2). This action is not a rulemaking and is not subject to the various statutory and other provisions applicable to a rulemaking.

Dated: January 21, 2011.

Lisa P. Jackson,

Administrator.

[FR Doc. 2011–1646 Filed 1–25–11; 8:45 am]

BILLING CODE 6560–50–P

APPENDIX 4

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

NO. 10-1380

SEPTEMBER TERM, 2012

EPA-75FR68094

FILED On: January 15, 2013

GROCERY MANUFACTURERS
ASSOCIATION, ET AL.,
PETITIONERS

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

GROWTH ENERGY,
INTERVENOR

Consolidated with 10-1414, 11-1002, 11-1046,
11-1072, 11-1086

Before: SENTELLE, *Chief Judge*, and TATEL and KAVANAUGH*, *Circuit Judges*

* Circuit Judge Kavanaugh would grant the petitions for panel rehearing

ORDER

Upon consideration of the petition of American Petroleum Institute, et. al. for panel rehearing filed on September 28, 2012; the petition of the Engine Products Group for panel rehearing filed on September 28, 2012; and the petition of American Fuel & Petrochemical Manufacturers and International Liquid Terminals Association for panel rehearing filed October 1, 2012, and the responses thereto, it is

ORDERED that the petitions be denied.

Per Curiam

FOR THE COURT:
Mark J. Langer, Clerk

BY: /s/

Jennifer M. Clark
Deputy Clerk

APPENDIX 5

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

FILED On: January 15, 2013

NO. 10-1380

GROCERY MANUFACTURERS ASSOCIATION, ET AL.,
PETITIONERS

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

GROWTH ENERGY,
INTERVENOR

Consolidated with 10-1414, 11-1002, 11-1046, 11-1072, 11-1086

On Petitions for Rehearing En Banc

Before: SENTELLE, *Chief Judge*, and HENDERSON, ROGERS, TATEL, GARLAND*, BROWN, GRIFFITH, and KAVANAUGH*, *Circuit Judges*

ORDER

The petition of the American Petroleum Institute and the Food Petitioners for rehearing en banc; the petition of the Engine Products Group for rehearing en banc; and the petition of American Fuel & Petrochemical Manufacturers and International Liquid Terminals Association for rehearing en banc, and the responses to the petitions were circulated to the full court, and a vote was requested. Thereafter, a majority of the judges eligible to participate did not vote in favor of the petitions. Upon consideration of the foregoing, it is

ORDERED that the petitions be denied.

FOR THE COURT:
Mark J. Langer, Clerk

BY: /s/
Jennifer M. Clark
Deputy Clerk

* Circuit Judge Garland did not participate in this matter.

** Circuit Judge Kavanaugh would grant the petitions.

** A statement by Circuit Judge Kavanaugh dissenting from the denial of the petition for rehearing en banc is attached.

KAVANAUGH, *Circuit Judge*, dissenting from the denial of rehearing en banc:

This case concerns a challenge to EPA's E15 waiver decision. The E15 waiver, in conjunction with the statutory renewable fuel mandate, will require petroleum producers to refine and sell E15, a blend of gasoline that contains 15 percent ethanol. The E15 waiver also will increase the demand for corn and thus increase corn prices for food producers. Two industry groups separately challenged the E15 waivers – the food producers who will pay higher prices for corn and the petroleum producers who will be forced to refine and sell E15. They contended that the E15 waiver will palpably and negatively affect the American food and petroleum industries, with corresponding impacts on American consumers. And they argued that the E15 waiver is unlawful because it exceeds EPA's statutory authority.

Even though EPA did not raise a challenge to the standing of the food producers or the petroleum producers, the panel dismissed the case on standing grounds. The panel determined that the *food producers* have Article III standing but lack prudential standing because, according to the panel, the food producers are not within the zone of interests under the relevant ethanol-related statute. The panel separately held that the *petroleum producers* lack Article III standing. We must reach the merits if *either* the food producers or the petroleum producers have standing. In my view, both groups plainly have standing.

I

To begin with, the panel ruled that the *food producers* lack prudential standing. That holding is incorrect for either of two alternative reasons.

First, the Administrative Procedure Act's prudential standing "zone of interests" requirement is not jurisdictional, and the issue was not raised in this case by respondent EPA. Therefore, the issue is forfeited. Based on older circuit precedent, however, the panel held that the zone of interests requirement is jurisdictional and that the court therefore had to consider it on its own motion. The circuits are split on whether the zone of interests requirement is jurisdictional; some other circuits disagree with the conclusion of the panel here. Applying recent Supreme Court precedents, I would conclude that the zone of interests requirement is not jurisdictional. The recent Supreme Court decisions have repeatedly emphasized more careful attention to the jurisdiction label. Those cases have stressed that a rule is not jurisdictional unless it is labeled by Congress as such or unless it speaks to the power of the courts to hear the case. *See, e.g.*, *Henderson ex rel. Henderson v. Shinseki*, 131 S. Ct. 1197, 1202-03 (2011); *Reed Elsevier, Inc. v. Muchnick*, 130 S. Ct. 1237, 1243-44 (2010).

Here, the APA gives a cause of action to "aggrieved" parties; the zone of interests requirement is simply a way to help determine whether a particular party is "aggrieved." The zone of interests requirement does not pertain to the power of the court to hear a case. Under the Supreme Court's recent decisions, therefore, the zone of interests requirement is not jurisdictional – a reading of the recent Supreme Court prec-

edents with which Judge Tatel appears to agree, as he indicated in his panel concurrence. As a result, because EPA chose not to challenge the food producers' prudential standing – in other words, because EPA accepted that the food producers were within the zone of interests and therefore an aggrieved party – that issue has been forfeited and is no longer part of the case.

Second, even if the prudential standing zone of interests issue were properly presented in this case, the food producers easily meet the requirements set forth in the Supreme Court's important recent decision in *Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians v. Patchak*. 132 S. Ct. 2199 (2012). Justice Kagan's opinion for the Supreme Court in *Match-E* – the Supreme Court's first comprehensive analysis of the prudential standing zone of interests requirement in 25 years – made clear that the zone of interests test poses a very low additional bar to an otherwise permissible APA suit by a party with Article III standing.

The Supreme Court's *Match-E* decision was issued after oral argument in our case, and the panel majority opinion appeared to treat it as a bit of an afterthought, devoting a scant two sentences to it. Under *Match-E*, as I read it, the food producers are well within the zone of interests of Section 7545, which sets forth the ethanol mandate. *See* 42 U.S.C. § 7545. The food producers' case for being within the zone of interests is especially strong here because Congress *expressly* took account of the interests of food producers, among others, in this ethanol-related statute. Moreover, the food producers' economic interests are directly affected by the increased demand

for corn caused by EPA's E15 waiver. The prudential standing zone of interests issue is thus not a close call here, in my view, even assuming that it is properly part of the case.

With the panel majority opinion left intact, this Court's prudential standing law will unfortunately linger in a state of uncertainty and error. I hope that it can be clarified at some point in a manner that comports with the Supreme Court's recent decisions on jurisdiction and prudential standing.

II

Of course, even if the food producers could not bring suit, the *petroleum producers* have separately challenged the E15 waiver. The panel ruled that the petroleum producers lack Article III standing to challenge the E15 waiver. But the petroleum producers are directly regulated parties; and as the Supreme Court has said, when a party "is himself an object of the action" at issue, "there is ordinarily little question that the action" has "caused him injury, and that a judgment preventing" the action "will redress it." *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561-62 (1992). Indeed, EPA did not even challenge the petroleum producers' Article III standing, recognizing at oral argument that the petroleum producers' standing was "self-evident." Tr. of Oral Arg. at 30.

Although we of course still have to consider Article III standing because Article III standing is jurisdictional, EPA's view on this point is quite telling. EPA did not raise Article III standing no doubt because it fully understands how this program actually works, and EPA appreciates that the combination of the statutory renewable fuel mandate and EPA's E15 waiver will obviously force petroleum producers to

refine and sell E15. The panel majority opinion speculated, however, that the petroleum producers can meet the renewable fuel mandate without refining and selling E15, and that EPA's E15 waiver therefore would not cause the injury to the petroleum producers. The evidence overwhelmingly indicates the contrary – namely, that petroleum producers will have to use E15 to meet the renewable fuel mandate. In fact, the ethanol producers who sought the E15 waiver specifically argued to EPA that the E15 waiver was "necessary" for petroleum producers to meet the renewable fuel mandate. What better evidence do we need? The petroleum producers have shown, at a minimum, the requisite "substantial probability" that the E15 waiver will require them to refine and sell E15. The petroleum producers thus have Article III standing to challenge the E15 waiver.

* * *

The panel's decision to throw out the suit on standing grounds is mistaken in multiple independent ways, in my respectful view. And the panel's standing holding is problematic not only because of the erroneous standing law that it creates, but also because it is outcome-determinative in a case with significant economic ramifications for the American food and petroleum industries, as well as for American consumers who will ultimately bear some of the costs.[1] The

---

[1] Although not my focus here, I also note that the E15 waiver apparently will harm some cars' engines, a point made by a third set of petitioners in this case (the engine manufacturers). Indeed, just a few weeks ago, the American Automobile Association warned of the damage E15 will cause to car engines and took the extraordinary step of publicly asking EPA to block the sale of E15. *See* Gary

panel's standing holding is outcome determinative because EPA will lose if we reach the merits. The E15 waiver plainly violates the statutory text. The statute does not allow a waiver for a new fuel if the waiver would cause failure of emissions standards in cars manufactured after 1974. The evidence is undisputed that this E15 waiver would cause failure of emissions standards in cars manufactured through 2000. Yet EPA still granted the waiver. EPA's action simply cannot be squared with the statutory text.

I respectfully dissent from the denial of rehearing en banc.

Strauss, *AAA Warns E15 Gasoline Could Cause Car Damage*, USA TODAY, November 30, 2012.

APPENDIX 6

Effective: January 1, 2009

United States Code Annotated Currentness
Title 42. The Public Health and Welfare

Chapter 85. Air Pollution Prevention and Control
(Refs & Annos)

Subchapter II. Emission Standards for
Moving Sources

Part A. Motor Vehicle Emission and Fuel Standards
(Refs & Annos)

§ 7545. Regulation of fuels

(a) Authority of Administrator to regulate

The Administrator may by regulation designate any fuel or fuel additive (including any fuel or fuel additive used exclusively in nonroad engines or nonroad vehicles) and, after such date or dates as may be prescribed by him, no manufacturer or processor of any such fuel or additive may sell, offer for sale, or introduce into commerce such fuel or additive unless the Administrator has registered such fuel or additive in accordance with subsection (b) of this section.

[CONTENT OMITTED]

(c) Offending fuels and fuel additives; control; prohibition

(1) The Administrator may, from time to time on the basis of information obtained under subsection (b) of this section or other information available to him, by regulation, control or prohibit the manufacture, introduction into commerce, offering for sale, or

sale of any fuel or fuel additive for use in a motor vehicle, motor vehicle engine, or nonroad engine or nonroad vehicle 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) [FN2] 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.

[CONTENT OMITTED]

(f) New fuels and fuel additives

(**1)(A)** Effective upon March 31, 1977, it shall be unlawful for any manufacturer of any fuel or fuel additive to first introduce into commerce, or to increase the concentration in use of, any fuel or fuel additive for general use in light duty 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.

(B) 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 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.

[CONTENT OMITTED]

(4) The Administrator, upon application of any manufacturer of any fuel or fuel additive, may waive the prohibitions established under paragraph (1) or (3) of this subsection or the limitation specified in paragraph (2) of this subsection, if he determines that the applicant has established that such fuel or fuel additive or a specified concentration thereof, and the emission products of such fuel or fuel additive or specified concentration thereof, will not cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is used) to achieve compliance by the vehicle or engine with the emission standards with respect to which it has been certified pursuant to sections 7525 and 7547(a) of this title. The Administrator shall take final action to grant or deny an application submitted under this paragraph, after public notice and comment, within 270 days of the receipt of such an application.

[CONTENT OMITTED]

(*o*) Renewable fuel program

(1) Definitions

In this section:

(A) Additional renewable fuel

The term "additional renewable fuel" means fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in home heating oil or jet fuel.

(B) Advanced biofuel

(i) In general

The term "advanced biofuel" means renewable fuel, other than ethanol derived from corn starch, that has lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50 percent less than baseline lifecycle greenhouse gas emissions.

(ii) Inclusions

The types of fuels eligible for consideration as "advanced biofuel" may include any of the following:

(I) Ethanol derived from cellulose, hemicellulose, or lignin.

(II) Ethanol derived from sugar or starch (other than corn starch).

(III) Ethanol derived from waste material, including crop residue, other vegetative waste material, animal waste, and food waste and yard waste.

(IV) Biomass-based diesel.

(V) Biogas (including landfill gas and sewage waste treatment gas) produced through the conversion of organic matter from renewable biomass.

(VI) Butanol or other alcohols produced through the conversion of organic matter from renewable biomass.

(VII) Other fuel derived from cellulosic biomass.

(C) Baseline lifecycle greenhouse gas emissions

The term "baseline lifecycle greenhouse gas emissions" means the average lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, for gasoline or diesel (whichever is being replaced by the renewable fuel) sold or distributed as transportation fuel in 2005.

(D) Biomass-based diesel

The term "biomass-based diesel" means renewable fuel that is biodiesel as defined in section 13220(f) of this title and that has lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50 percent less than the baseline lifecycle greenhouse gas emissions. Notwithstanding the preceding sentence, renewable fuel derived from co-processing biomass with a petroleum feedstock shall be advanced biofuel if it meets the requirements of subparagraph (B), but is not biomass-based diesel.

(E) Cellulosic biofuel

The term "cellulosic biofuel" means renewable fuel derived from any cellulose, hemicellulose, or lignin that is derived from renewable biomass and that has lifecycle greenhouse gas emissions, as determined by the Administrator, that are at least 60 percent less than the baseline lifecycle greenhouse gas emissions.

(F) Conventional biofuel

The term "conventional biofuel" means renewable fuel that is ethanol derived from corn starch.

(G) Greenhouse gas

The term "greenhouse gas" means carbon dioxide, hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons, sulfur hexafluoride. The Administrator may include any other anthropogenically-emitted gas that is determined by the Administrator, after notice and comment, to contribute to global warming.

(H) Lifecycle greenhouse gas emissions

The term "lifecycle greenhouse gas emissions" means the aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes), as determined by the Administrator, related to the full fuel lifecycle, including all stages of fuel and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery and use of the finished fuel to the ultimate consumer, where the mass values for all greenhouse gases are adjusted to account for their relative global warming potential.

(I) Renewable biomass

The term "renewable biomass" means each of the following:

(i) Planted crops and crop residue harvested from agricultural land cleared or cultivated at any time prior to the enactment of this sentence that is either actively managed or fallow, and nonforested.

(ii) Planted trees and tree residue from actively managed tree plantations on non-federal land cleared at any time prior to enactment of this sen-

tence, including land belonging to an Indian tribe or an Indian individual, that is held in trust by the United States or subject to a restriction against alienation imposed by the United States.

(iii) Animal waste material and animal byproducts.

(iv) Slash and pre-commercial thinnings that are from non-federal forestlands, including forestlands belonging to an Indian tribe or an Indian individual, that are held in trust by the United States or subject to a restriction against alienation imposed by the United States, but not forests or forestlands that are ecological communities with a global or State ranking of critically imperiled, imperiled, or rare pursuant to a State Natural Heritage Program, old growth forest, or late successional forest.

(v) Biomass obtained from the immediate vicinity of buildings and other areas regularly occupied by people, or of public infrastructure, at risk from wildfire.

(vi) Algae.

(vii) Separated yard waste or food waste, including recycled cooking and trap grease.

(J) Renewable fuel

The term "renewable fuel" means fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in a transportation fuel.

(K) Small refinery

The term "small refinery" means a refinery for which the average aggregate daily crude oil throughput for a calendar year (as determined by dividing

the aggregate throughput for the calendar year by the number of days in the calendar year) does not exceed 75,000 barrels.

(L) Transportation fuel

The term "transportation fuel" means fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except for ocean-going vessels).

(2) Renewable fuel program

(A) Regulations

(i) In general

Not later than 1 year after August 8, 2005, the Administrator shall promulgate regulations to ensure that gasoline sold or introduced into commerce in the United States (except in noncontiguous States or territories), on an annual average basis, contains the applicable volume of renewable fuel determined in accordance with subparagraph (B). Not later than 1 year after December 19, 2007, the Administrator shall revise the regulations under this paragraph to ensure that transportation fuel sold or introduced into commerce in the United States (except in noncontiguous States or territories), on an annual average basis, contains at least the applicable volume of renewable fuel, advanced biofuel, cellulosic biofuel, and biomass-based diesel, determined in accordance with subparagraph (B) and, in the case of any such renewable fuel produced from new facilities that commence construction after the date of enactment of this sentence, achieves at least a 20 percent reduction in lifecycle greenhouse gas emissions compared to baseline lifecycle greenhouse gas emissions.

(ii) Noncontiguous State opt-in

(I) In general

On the petition of a noncontiguous State or territory, the Administrator may allow the renewable fuel program established under this subsection to apply in the noncontiguous State or territory at the same time or any time after the Administrator promulgates regulations under this subparagraph.

(II) Other actions

In carrying out this clause, the Administrator may--

(aa) issue or revise regulations under this paragraph;

(bb) establish applicable percentages under paragraph (3);

(cc) provide for the generation of credits under paragraph (5); and

(dd) take such other actions as are necessary to allow for the application of the renewable fuels program in a noncontiguous State or territory.

(iii) Provisions of regulations

Regardless of the date of promulgation, the regulations promulgated under clause (i)--

(I) shall contain compliance provisions applicable to refineries, blenders, distributors, and importers, as appropriate, to ensure that the requirements of this paragraph are met; but

(II) shall not--

(aa) restrict geographic areas in which renewable fuel may be used; or

(bb) impose any per-gallon obligation for the use of renewable fuel.

(iv) Requirement in case of failure to promulgate regulations

If the Administrator does not promulgate regulations under clause (i), the percentage of renewable fuel in gasoline sold or dispensed to consumers in the United States, on a volume basis, shall be 2.78 percent for calendar year 2006.

(B) Applicable volumes

(i) Calendar years after 2005

(I) Renewable fuel

For the purpose of subparagraph (A), the applicable volume of renewable fuel for the calendar years 2006 through 2022 shall be determined in accordance with the following table:

Calendar year	Applicable volume of renewable fuel (in billions of gallons)
2006	4.0
2007	4.7
2008	9.0
2009	11.1
2010	12.95
2011	13.95
2012	15.2
2013	16.55
2014	18.15
2015	20.5
2016	22.25
2017	24.0
2018	6.0
2019	28.0

2020	30.0
2021	33.0
2022	36.0

(II) Advanced biofuel

For the purpose of subparagraph (A), of the volume of renewable fuel required under subclause (I), the applicable volume of advanced biofuel for the calendar years 2009 through 2022 shall be determined in accordance with the following table:

Calendar Year	**Applicable volume of advanced biofuel (in billions of gallons)**
2009	0.6
2010	0.95
2011	1.35
2012	2.0
2013	2.75
2014	3.75
2015	5.5
2016	7.25
2017	9.0
2018	11.0
2019	13.0
2020	15.0
2021	18.0
2022	21.0

(III) Cellulosic biofuel

For the purpose of subparagraph (A), of the volume of advanced biofuel required under subclause (II), the applicable volume of cellulosic biofuel for the calendar years 2010 through 2022 shall be determined in accordance with the following table:

Calendar Year	Applicable volume of cellulosic biofuel (in billions of gallons)
2010	0.1
2011	0.25
2012	0.5
2013	1.0
2014	1.75
2015	3.0
2016	4.25
2017	5.5
2018	7.0
2019	8.5
2020	10.5
2021	13.5
2022	16.0

(IV) Biomass-based diesel

For the purpose of subparagraph (A), of the volume of advanced biofuel required under subclause (II), the applicable volume of biomass-based diesel for the calendar years 2009 through 2012 shall be determined in accordance with the following table:

Calendar Year	Applicable volume of biomass-c based diesel (in billions of gallons)
2009	0.5
2010	0.65
2011	0.80
2012	1.0

(ii) Other calendar years

For the purposes of subparagraph (A), the applicable volumes of each fuel specified in the tables in clause (i) for calendar years after the calendar years specified in the tables shall be determined by the Administrator, in coordination with the Secretary of Energy and the Secretary of Agriculture, based on a review of the implementation of the program during calendar years specified in the tables, and an analysis of--

(I) the impact of the production and use of renewable fuels on the environment, including on air quality, climate change, conversion of wetlands, ecosystems, wildlife habitat, water quality, and water supply;

(II) the impact of renewable fuels on the energy security of the United States;

(III) the expected annual rate of future commercial production of renewable fuels, including advanced biofuels in each category (cellulosic biofuel and biomass-based diesel);

(IV) the impact of renewable fuels on the infrastructure of the United States, including deliverability of materials, goods, and products other than

renewable fuel, and the sufficiency of infrastructure to deliver and use renewable fuel;

(V) the impact of the use of renewable fuels on the cost to consumers of transportation fuel and on the cost to transport goods; and

(VI) the impact of the use of renewable fuels on other factors, including job creation, the price and supply of agricultural commodities, rural economic development, and food prices.

The Administrator shall promulgate rules establishing the applicable volumes under this clause no later than 14 months before the first year for which such applicable volume will apply.

(iii) Applicable volume of advanced biofuel

For the purpose of making the determinations in clause (ii), for each calendar year, the applicable volume of advanced biofuel shall be at least the same percentage of the applicable volume of renewable fuel as in calendar year 2022.

(iv) Applicable volume of cellulosic biofuel

For the purpose of making the determinations in clause (ii), for each calendar year, the applicable volume of cellulosic biofuel established by the Administrator shall be based on the assumption that the Administrator will not need to issue a waiver for such years under paragraph (7)(D).

(v) Minimum applicable volume of biomass-based diesel

For the purpose of making the determinations in clause (ii), the applicable volume of biomass-based diesel shall not be less than the applicable volume listed in clause (i)(IV) for calendar year 2012.

(3) Applicable percentages

(A) Provision of estimate of volumes of gasoline sales

Not later than October 31 of each of calendar years 2005 through 2021, the Administrator of the Energy Information Administration shall provide to the Administrator of the Environmental Protection Agency an estimate, with respect to the following calendar year, of the volumes of transportation fuel, biomass-based diesel, and cellulosic biofuel projected to be sold or introduced into commerce in the United States.

(B) Determination of applicable percentages

(i) In general

Not later than November 30 of each of calendar years 2005 through 2021, based on the estimate provided under subparagraph (A), the Administrator of the Environmental Protection Agency shall determine and publish in the Federal Register, with respect to the following calendar year, the renewable fuel obligation that ensures that the requirements of paragraph (2) are met.

(ii) Required elements

The renewable fuel obligation determined for a calendar year under clause (i) shall--

(I) be applicable to refineries, blenders, and importers, as appropriate;

(II) be expressed in terms of a volume percentage of transportation fuel sold or introduced into commerce in the United States; and

(III) subject to subparagraph (C)(i), consist of a single applicable percentage that applies to all categories of persons specified in subclause (I).

(C) Adjustments

In determining the applicable percentage for a calendar year, the Administrator shall make adjustments--

(i) to prevent the imposition of redundant obligations on any person specified in subparagraph (B)(ii)(I); and

(ii) to account for the use of renewable fuel during the previous calendar year by small refineries that are exempt under paragraph (9).

(4) Modification of greenhouse gas reduction percentages

(A) In general

The Administrator may, in the regulations under the last sentence of paragraph (2)(A)(i), adjust the 20 percent, 50 percent, and 60 percent reductions in lifecycle greenhouse gas emissions specified in paragraphs (2)(A)(i) (relating to renewable fuel), (1)(D) (relating to biomass-based diesel), (1)(B)(i) (relating to advanced biofuel), and (1)(E) (relating to cellulosic biofuel) to a lower percentage. For the 50 and 60 percent reductions, the Administrator may make such an adjustment only if he determines that generally such reduction is not commercially feasible for fuels made using a variety of feedstocks, technologies, and processes to meet the applicable reduction.

(B) Amount of adjustment

In promulgating regulations under this paragraph, the specified 50 percent reduction in greenhouse gas

emissions from advanced biofuel and in biomass-based diesel may not be reduced below 40 percent. The specified 20 percent reduction in greenhouse gas emissions from renewable fuel may not be reduced below 10 percent, and the specified 60 percent reduction in greenhouse gas emissions from cellulosic biofuel may not be reduced below 50 percent.

(C) Adjusted reduction levels

An adjustment under this paragraph to a percent less than the specified 20 percent greenhouse gas reduction for renewable fuel shall be the minimum possible adjustment, and the adjusted greenhouse gas reduction shall be established by the Administrator at the maximum achievable level, taking cost in consideration, for natural gas fired corn-based ethanol plants, allowing for the use of a variety of technologies and processes. An adjustment in the 50 or 60 percent greenhouse gas levels shall be the minimum possible adjustment for the fuel or fuels concerned, and the adjusted greenhouse gas reduction shall be established at the maximum achievable level, taking cost in consideration, allowing for the use of a variety of feedstocks, technologies, and processes.

(D) 5-year review

Whenever the Administrator makes any adjustment under this paragraph, not later than 5 years thereafter he shall review and revise (based upon the same criteria and standards as required for the initial adjustment) the regulations establishing the adjusted level.

(E) Subsequent adjustments

After the Administrator has promulgated a final rule under the last sentence of paragraph (2)(A)(i)

with respect to the method of determining lifecycle greenhouse gas emissions, except as provided in subparagraph (D), the Administrator may not adjust the percent greenhouse gas reduction levels unless he determines that there has been a significant change in the analytical methodology used for determining the lifecycle greenhouse gas emissions. If he makes such determination, he may adjust the 20, 50, or 60 percent reduction levels through rulemaking using the criteria and standards set forth in this paragraph.

(F) Limit on upward adjustments

If, under subparagraph (D) or (E), the Administrator revises a percent level adjusted as provided in subparagraphs (A), (B), and (C) to a higher percent, such higher percent may not exceed the applicable percent specified in paragraph (2)(A)(i), (1)(D), (1)(B)(i), or (1)(E).

(G) Applicability of adjustments

If the Administrator adjusts, or revises, a percent level referred to in this paragraph or makes a change in the analytical methodology used for determining the lifecycle greenhouse gas emissions, such adjustment, revision, or change (or any combination thereof) shall only apply to renewable fuel from new facilities that commence construction after the effective date of such adjustment, revision, or change.

(5) Credit program

(A) In general

The regulations promulgated under paragraph (2)(A) shall provide--

(i) for the generation of an appropriate amount of credits by any person that refines, blends,

or imports gasoline that contains a quantity of renewable fuel that is greater than the quantity required under paragraph (2);

(ii) for the generation of an appropriate amount of credits for biodiesel; and

(iii) for the generation of credits by small refineries in accordance with paragraph (9)(C).

(B) Use of credits

A person that generates credits under subparagraph (A) may use the credits, or transfer all or a portion of the credits to another person, for the purpose of complying with paragraph (2).

(C) Duration of credits

A credit generated under this paragraph shall be valid to show compliance for the 12 months as of the date of generation.

(D) Inability to generate or purchase sufficient credits

The regulations promulgated under paragraph (2)(A) shall include provisions allowing any person that is unable to generate or purchase sufficient credits to meet the requirements of paragraph (2) to carry forward a renewable fuel deficit on condition that the person, in the calendar year following the year in which the renewable fuel deficit is created--

(i) achieves compliance with the renewable fuel requirement under paragraph (2); and

(ii) generates or purchases additional renewable fuel credits to offset the renewable fuel deficit of the previous year.

(E) Credits for additional renewable fuel

The Administrator may issue regulations providing: (i) for the generation of an appropriate amount of credits by any person that refines, blends, or imports additional renewable fuels specified by the Administrator; and (ii) for the use of such credits by the generator, or the transfer of all or a portion of the credits to another person, for the purpose of complying with paragraph (2).

(6) Seasonal variations in renewable fuel use

(A) Study

For each of calendar years 2006 through 2012, the Administrator of the Energy Information Administration shall conduct a study of renewable fuel blending to determine whether there are excessive seasonal variations in the use of renewable fuel.

(B) Regulation of excessive seasonal variations

If, for any calendar year, the Administrator of the Energy Information Administration, based on the study under subparagraph (A), makes the determinations specified in subparagraph (C), the Administrator of the Environmental Protection Agency shall promulgate regulations to ensure that 25 percent or more of the quantity of renewable fuel necessary to meet the requirements of paragraph (2) is used during each of the 2 periods specified in subparagraph (D) of each subsequent calendar year.

(C) Determinations

The determinations referred to in subparagraph (B) are that--

(i) less than 25 percent of the quantity of renewable fuel necessary to meet the requirements of

paragraph (2) has been used during 1 of the 2 periods specified in subparagraph (D) of the calendar year;

(ii) a pattern of excessive seasonal variation described in clause (i) will continue in subsequent calendar years; and

(iii) promulgating regulations or other requirements to impose a 25 percent or more seasonal use of renewable fuels will not prevent or interfere with the attainment of national ambient air quality standards or significantly increase the price of motor fuels to the consumer.

(D) Periods

The 2 periods referred to in this paragraph are--

(i) April through September; and

(ii) January through March and October through December.

(E) Exclusion

Renewable fuel blended or consumed in calendar year 2006 in a State that has received a waiver under section 7543(b) of this title shall not be included in the study under subparagraph (A).

(F) State exemption from seasonality requirements

Notwithstanding any other provision of law, the seasonality requirement relating to renewable fuel use established by this paragraph shall not apply to any State that has received a waiver under section 7543(b) of this title or any State dependent on refineries in such State for gasoline supplies.

(7) Waivers

(A) In general

The Administrator, in consultation with the Secretary of Agriculture and the Secretary of Energy, may waive the requirements of paragraph (2) in whole or in part on petition by one or more States, by any person subject to the requirements of this subsection, or by the Administrator on his own motion by reducing the national quantity of renewable fuel required under paragraph (2)--

(i) based on a determination by the Administrator, after public notice and opportunity for comment, that implementation of the requirement would severely harm the economy or environment of a State, a region, or the United States; or

(ii) based on a determination by the Administrator, after public notice and opportunity for comment, that there is an inadequate domestic supply.

(B) Petitions for waivers

The Administrator, in consultation with the Secretary of Agriculture and the Secretary of Energy, shall approve or disapprove a petition for a waiver of the requirements of paragraph (2) within 90 days after the date on which the petition is received by the Administrator.

(C) Termination of waivers

A waiver granted under subparagraph (A) shall terminate after 1 year, but may be renewed by the Administrator after consultation with the Secretary of Agriculture and the Secretary of Energy.

(D) Cellulosic biofuel

(i) For any calendar year for which the projected volume of cellulosic biofuel production is less than the minimum applicable volume estab-

lished under paragraph (2)(B), as determined by the Administrator based on the estimate provided under paragraph (3)(A), not later than November 30 of the preceding calendar year, the Administrator shall reduce the applicable volume of cellulosic biofuel required under paragraph (2)(B) to the projected volume available during that calendar year. For any calendar year in which the Administrator makes such a reduction, the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under paragraph (2)(B) by the same or a lesser volume.

(ii) Whenever the Administrator reduces the minimum cellulosic biofuel volume under this subparagraph, the Administrator shall make available for sale cellulosic biofuel credits at the higher of $0.25 per gallon or the amount by which $3.00 per gallon exceeds the average wholesale price of a gallon of gasoline in the United States. Such amounts shall be adjusted for inflation by the Administrator for years after 2008.

(iii) Eighteen months after December 19, 2007, the Administrator shall promulgate regulations to govern the issuance of credits under this subparagraph. The regulations shall set forth the method for determining the exact price of credits in the event of a waiver. The price of such credits shall not be changed more frequently than once each quarter. These regulations shall include such provisions, including limiting the credits' uses and useful life, as the Administrator deems appropriate to assist market liquidity and transparency, to provide appropriate certainty for regulated entities and renewable fuel producers, and to limit any potential misuse of

cellulosic biofuel credits to reduce the use of other renewable fuels, and for such other purposes as the Administrator determines will help achieve the goals of this subsection. The regulations shall limit the number of cellulosic biofuel credits for any calendar year to the minimum applicable volume (as reduced under this subparagraph) of cellulosic biofuel for that year.

(E) Biomass-based diesel

(i) Market evaluation

The Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, shall periodically evaluate the impact of the biomass-based diesel requirements established under this paragraph on the price of diesel fuel.

(ii) Waiver

If the Administrator determines that there is a significant renewable feedstock disruption or other market circumstances that would make the price of biomass-based diesel fuel increase significantly, the Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, shall issue an order to reduce, for up to a 60-day period, the quantity of biomass-based diesel required under subparagraph (A) by an appropriate quantity that does not exceed 15 percent of the applicable annual requirement for biomass-based diesel. For any calendar year in which the Administrator makes a reduction under this subparagraph, the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under paragraph (2)(B) by the same or a lesser volume.

(iii) Extensions

If the Administrator determines that the feedstock disruption or circumstances described in clause (ii) is continuing beyond the 60-day period described in clause (ii) or this clause, the Administrator, in consultation with the Secretary of Energy and the Secretary of Agriculture, may issue an order to reduce, for up to an additional 60-day period, the quantity of biomass-based diesel required under subparagraph (A) by an appropriate quantity that does not exceed an additional 15 percent of the applicable annual requirement for biomass-based diesel.

(F) Modification of applicable volumes

For any of the tables in paragraph (2)(B), if the Administrator waives--

(i) at least 20 percent of the applicable volume requirement set forth in any such table for 2 consecutive years; or

(ii) at least 50 percent of such volume requirement for a single year, the Administrator shall promulgate a rule (within 1 year after issuing such waiver) that modifies the applicable volumes set forth in the table concerned for all years following the final year to which the waiver applies, except that no such modification in applicable volumes shall be made for any year before 2016. In promulgating such a rule, the Administrator shall comply with the processes, criteria, and standards set forth in paragraph (2)(B)(ii).

(8) Study and waiver for initial year of program

(A) In general

Not later than 180 days after August 8, 2005, the Secretary of Energy shall conduct for the Adminis-

trator a study assessing whether the renewable fuel requirement under paragraph (2) will likely result in significant adverse impacts on consumers in 2006, on a national, regional, or State basis.

(B) Required evaluations

The study shall evaluate renewable fuel--

(i) supplies and prices;

(ii) blendstock supplies; and

(iii) supply and distribution system capabilities.

(C) Recommendations by the Secretary

Based on the results of the study, the Secretary of Energy shall make specific recommendations to the Administrator concerning waiver of the requirements of paragraph (2), in whole or in part, to prevent any adverse impacts described in subparagraph (A).

(D) Waiver

(i) In general

Not later than 270 days after August 8, 2005, the Administrator shall, if and to the extent recommended by the Secretary of Energy under subparagraph (C), waive, in whole or in part, the renewable fuel requirement under paragraph (2) by reducing the national quantity of renewable fuel required under paragraph (2) in calendar year 2006.

(ii) No effect on waiver authority

Clause (i) does not limit the authority of the Administrator to waive the requirements of paragraph (2) in whole, or in part, under paragraph (7).

(9) Small refineries

(A) Temporary exemption

(i) In general

The requirements of paragraph (2) shall not apply to small refineries until calendar year 2011.

(ii) Extension of exemption

(I) Study by Secretary of Energy

Not later than December 31, 2008, the Secretary of Energy shall conduct for the Administrator a study to determine whether compliance with the requirements of paragraph (2) would impose a disproportionate economic hardship on small refineries.

(II) Extension of exemption

In the case of a small refinery that the Secretary of Energy determines under subclause (I) would be subject to a disproportionate economic hardship if required to comply with paragraph (2), the Administrator shall extend the exemption under clause (i) for the small refinery for a period of not less than 2 additional years.

(B) Petitions based on disproportionate economic hardship

(i) Extension of exemption

A small refinery may at any time petition the Administrator for an extension of the exemption under subparagraph (A) for the reason of disproportionate economic hardship.

(ii) Evaluation of petitions

In evaluating a petition under clause (i), the Administrator, in consultation with the Secretary of Energy, shall consider the findings of the study under subparagraph (A)(ii) and other economic factors.

(iii) Deadline for action on petitions

The Administrator shall act on any petition submitted by a small refinery for a hardship exemption not later than 90 days after the date of receipt of the petition.

(C) Credit program

If a small refinery notifies the Administrator that the small refinery waives the exemption under subparagraph (A), the regulations promulgated under paragraph (2)(A) shall provide for the generation of credits by the small refinery under paragraph (5) beginning in the calendar year following the date of notification.

(D) Opt-in for small refineries

A small refinery shall be subject to the requirements of paragraph (2) if the small refinery notifies the Administrator that the small refinery waives the exemption under subparagraph (A).

(10) Ethanol market concentration analysis

(A) Analysis

(i) In general

Not later than 180 days after August 8, 2005, and annually thereafter, the Federal Trade Commission shall perform a market concentration analysis of the ethanol production industry using the Herfindahl-Hirschman Index to determine whether there is sufficient competition among industry participants to avoid price-setting and other anticompetitive behavior.

(ii) Scoring

For the purpose of scoring under clause (i) using the Herfindahl-Hirschman Index, all marketing ar-

rangements among industry participants shall be considered.

(B) Report

Not later than December 1, 2005, and annually thereafter, the Federal Trade Commission shall submit to Congress and the Administrator a report on the results of the market concentration analysis performed under subparagraph (A)(i).

(11) Periodic reviews

To allow for the appropriate adjustment of the requirements described in subparagraph (B) of paragraph (2), the Administrator shall conduct periodic reviews of--

(A) existing technologies;

(B) the feasibility of achieving compliance with the requirements; and

(C) the impacts of the requirements described in subsection (a)(2) of this section on each individual and entity described in paragraph (2).

(12) Effect on other provisions

Nothing in this subsection, or regulations issued pursuant to this subsection, shall affect or be construed to affect the regulatory status of carbon dioxide or any other greenhouse gas, or to expand or limit regulatory authority regarding carbon dioxide or any other greenhouse gas, for purposes of other provisions (including section 7475 of this title) of this chapter. The previous sentence shall not affect implementation and enforcement of this subsection.

[CONTENT OMITTED]

APPENDIX 7

ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OAR-2009-0211; FRL-8894-5]

Notice of Receipt of a Clean Air Act Waiver Application To Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Request for Comment

Tuesday, April 21, 2009

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of partial waiver decision.

SUMMARY: On March 6, 2009, Growth Energy and 54 ethanol manufacturers submitted an application for a waiver of the prohibition of the introduction into commerce of certain fuels and fuel additives set forth in section 211(f) of the Clean Air Act ("the Act"). This application seeks a waiver for ethanol-gasoline blends of up to 15 percent by volume ethanol ("E15"). The statute directs the Administrator of EPA to grant or deny this application within 270 days of receipt by EPA, in this instance December 1, 2009. In this Notice, EPA is soliciting comment on all aspects of the waiver application, including whether a waiver is appropriate for ethanol-gasoline blends over 10 percent and less than 15 percent.

[CONTENT OMITTED]

Statutory Background

Section 211(f)(1) of the Act makes it unlawful for any manufacturer of any fuel or fuel additive to first introduce into commerce, or to increase the concentration in use of, any fuel or fuel additive for use by

many 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 206 of the Act. EPA last issued an interpretive rule on the phrase "substantially similar" at 73 FR 22281 (April 25, 2008).

Section 211(f)(4) of the Act provides that upon application by any fuel or fuel additive manufacturer, the Administrator may waive the prohibitions of section 211(f)(1) if the Administrator determines that the applicant has established that such fuel or fuel additive or a specified concentration thereof, and the emission products of such fuel or fuel additive or a specified concentration thereof, will not cause or contribute to a failure of any emission control device or system (over the useful life of the motor vehicle, motor vehicle engine, nonroad engine or nonroad vehicle in which such device or system is used) to achieve compliance by the vehicle or engine with the emission standards to which it has been certified pursuant to sections 206 and 213(a) of the Act. In other words, the Administrator may grant a waiver for a prohibited fuel or fuel additive if the applicant can demonstrate that the new fuel or fuel additive will not cause or contribute to engines, vehicles or equipment failing to meet their emissions standards over their useful life. The statute requires that the Administrator shall take final action to grant or deny the application, after public notice and comment, within 270 days of receipt of the application.

The current statute reflects changes made under the Energy Independence and Security Act of 2007 which explicitly extended the section 211(f)(4) waiver

provision to nonroad engines and nonroad vehicles, extended the period allowed for consideration of the waiver application from 180 days to 270 days and deleted a provision that resulted in a waiver becoming effective by operation of law if the Administrator made no decision within 180 days. The 1978 waiver for 10 percent ethanol in gasoline ("E10") became effective under the previous provision when no decision was made by the Administrator regarding the waiver application and the waiver became effective by operation of law after passage of 180 days.

Context of Growth Energy's Waiver Application

On March 6, 2009, Growth Energy and 54 ethanol manufacturers submitted a waiver application to the Administrator, pursuant to section 211(f)(4) of the Act, for ethanol-gasoline blends containing up to 15 percent ethanol by volume ("E15").

Growth Energy maintains that under the renewable fuel program requirements of the Energy Independence and Security Act of 2007, which is now primarily satisfied by the use of ethanol in motor vehicle gasoline, there exists a "blend barrier" or "blendwall" by which motor vehicle gasoline in the U.S. essentially will become saturated with ethanol at the 10 volume percent level very soon. Growth Energy maintains that a necessary first step is to increase the allowable amount of ethanol in motor vehicle gasoline up to 15 percent (E15) in order to delay the blendwall. They also claim other ways of delaying the blendwall could include adding more stations offering E85 blends and bringing in the renewable fuel mandate specified in the Energy Independence and Security Act of 2007. For its part, Growth Energy claims that the "blendwall" will make those re-

newable fuel mandates unreachable and that there are substantial environmental benefits associated with higher ethanol blends.

Growth Energy states in its waiver application that its supporting studies and extensive experience with ethanol support a conclusion that E15 will not cause or contribute to the failure of an emission control system such that the engine or vehicles fails to achieve compliance with its emission standards. In addition to the information that Growth Energy submitted, EPA is aware that several interested parties are investigating the impact that midlevel blends (e.g., E15 or E20) may have on vehicles and equipment. These testing programs are evaluating emissions impacts as well as other types of impacts (i.e., catalyst, engine, and fuel system durability, and onboard diagnostics) on vehicles and equipment. The Department of Energy, working in conjunction with the Coordinating Research Council and other interested parties, is leading a substantial testing effort. Results from this program to date are referenced in Growth Energy's waiver request, and we expect additional data will be added to the docket as it becomes available.

One potential outcome at the end of our process, after reviewing the entire body of scientific and technical information available to us, may be an indication that a fuel up to E15 could meet the criteria for a waiver for some vehicles and engines but not for others. Some vehicles and engines may be more susceptible to emission increases or durability problems that cause or contribute to these vehicles or engines failing to meet their emissions standards. Assuming the criteria are met for a certain subset of vehicles,

one interpretation of section 211(f)(4) is that the waiver could be approved in part for only that subset of vehicles or engines for which testing supports its use and for which adequate conditions or other measures could be implemented to ensure its proper use.

Another potential outcome is a conclusion that ethanol blends of greater than 10 percent, but less than 15 percent, warrant a waiver. To take such action, the Agency would need similar evidence, such as emissions durability testing, as what would be needed to address a waiver for a 15 percent blend.

Any approval, either fully or partially, is likely to elicit a market response to add E15 blends to E10 and E0 blends in the marketplace, rather than replace them. Thus consumers would merely have an additional choice of fuel.

Experience in past fuel programs has shown that even with consumer education and fuel implementation efforts, there sometimes continues to be public concern for new fuel requirements. Several examples include the phasedown of the amount of lead allowed in gasoline in the 1980s and the introduction of reformulated gasoline (RFG) in 1995. Some segments of the public were convinced that the new fuels caused vehicle problems or decreases in fuel economy. Although substantial test data proved otherwise, these concerns lingered in some cases for several years. As a direct result of these experiences, EPA wants to be assured that prior to granting a waiver, sufficient testing has been conducted to demonstrate the compatibility of a waiver fuel with engine, fuel and emission control system components.

EPA has previously granted waivers with certain restrictions or conditions, including requirements that precautions be taken to prevent using the waiver fuel as a base fuel for adding oxygenates, that certain corrosion inhibitors be utilized when producing the waiver fuel, and that waiver fuels meet voluntary consensus-based standards such as those developed by the American Society for Testing and Materials (ASTM). In a partial waiver for fueling certain types of vehicles or engines, the condition placed on the fuel manufacturer would be that the fuel is only used in certain vehicles or engines (i.e., E15 is only used in the subset of vehicles or engines identified in the partial or conditional waiver). EPA recognizes that there may be legal and practical limitations on what a fuel manufacturer may be required or able to do to ensure compliance with the conditions of the waiver, including preventing misfueling. EPA has not previously imposed this type of "downstream" condition on the fuel manufacturer as a condition for obtaining a section 211(f)(4) waiver. EPA does, however, have experience with compliance problems occurring when two types of gasoline have been available at service stations. Beginning in the mid-1970s with the introduction of unleaded gasoline and continuing into the 1980s as leaded gasoline was phased out, there was significant intentional misfueling by consumers. At the time most service stations had pumps dispensing both leaded and unleaded gasoline and a price differential as small as a few cents per gallon was enough to cause some consumers to misfuel.

Request for Comments

[CONTENT OMITTED]

APPENDIX 8

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

NO. 10-1380

FILED On: October 25, 2011

GROCERY MANUFACTURERS
OF AMERICA, ET AL.,
PETITIONERS

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

Consolidated with 10-1414, 11-1002, 11-1046,
11-1072, 11-1086

On Petitions for Review from the Environmental
Protection Agency

FINAL OPENING BRIEF FOR PETITIONERS

[CONTENT OMITTED]

STANDING

Petitioners in these six consolidated cases fall into three categories – engine products, petroleum, and food. The engines products group – the Alliance, Global Automakers, NMMA, and OPEI – is made up of trade associations whose members manufacture light-duty motor vehicles, engines and related equipment, marine vessels, and outdoor power equipment, and whose emission-control devices, systems, and engines may be harmed by the use of E15. They are directly affected by the partial E15 waiver. The Alliance and Global Automakers will be retroactively required to permit E15 to be used in all MY2001 and newer motor vehicles currently on the road, as well as all future vehicles. None of the current vehicles (other than a small number of flex-fuel vehicles) were manufactured, certified, or warranted to use ethanol blends greater than E10. They therefore face serious risks of liability imposed by numerous state and federal laws, as well as operational performance and consumer satisfaction exposure. *See, e.g.*, CAA, 42 U.S.C. §§ 7541 and 7547 (imposing liability for in-use emission warranty claims and providing for recall of vehicles and engines due to non-conformity with applicable standards); National Traffic and Motor Vehicle Safety Act of 1966, 15 U.S.C. § 1381, *et seq*. (requiring recalls under 49 C.F.R. Part 577 due to safetyrelated problems that potentially may be caused by the use of E15); Consumer Product Safety Act, 15 U.S.C. § 2051, *et seq*. (same). Vessel owners are potentially liable for safety-related problems that may be caused by the use of E15 under the Federal Boat Safety Act, 46 U.S.C. 4301, *et seq*. These Petitioners as well as individual members of the associations provided information

detailing their harms to EPA in their comments opposing the E15 waiver. *See, e.g.*, JA387-433 [R2,559.1] (ALLSAFE and OPEI); JA532-567 [R2,679.1] (NMMA); JA132-141 [R1,026.1] (Mercury Marine); JA159-170 [R2,515] (Mercedes-Benz USA).

Three petroleum groups – API, NPRA, and WSPA – have members that that produce gasoline from crude oil. ILTA has members that handle, store, and transfer bulk quantities of gasoline and renewable fuels. Accommodating an additional gasoline-ethanol blend in the fuel market – the direct result of EPA's approval of E15 – will require petroleum group members to undertake special fuel production, transportation, and fuel segregation efforts. In addition, members that produce E15 blends will be required to comply with new compliance surveys and fuel pump dispenser labeling requirements. These actions will impose substantial economic costs.

Members of the petroleum group who are refiners and importers are also obligated parties under EISA, *see* 75 FR at 14,867-68 (to be codified at 40 C.F.R. § 80.1406). This means that refiners and importers will necessarily have to introduce E15 into commerce, which will affect other petroleum group members engaged in downstream operations. *See id.* at 14,772 (describing "essentially all downstream [fuel] blenders and terminals," as well as the traditional "refiners and importers" as "regulated parties under RFS[] since essentially all gasoline will be blended with ethanol"). EPA's partial E15 waiver therefore will require these organizations to expend enormous resources to blend and introduce E15 into the market

In addition, petroleum group members could potentially face significant liability risks due to the harms

that could result from using E15 in some waivered vehicles or in misfueling pre-MY2001 vehicles and other engines, including power tools, generators, and vessels, for which E15 is manifestly unsuitable. These Petitioners, as well as individual members of their organizations, therefore submitted numerous comments explaining such harms. *See, e.g.*, JA206-235 [R2,550] (NPRA); JA568-592 [R2,680] (API); JA623-625 [R2,824] (BP America); JA626-627 [R2,883] (Chevron). *See also* U.S. Gov't Accountability Office, GAO- 11-513, *BIOFUELS: Challenges to the Transportation, Sale, and Use of Intermediate Ethanol Blends* 27-30 (June 2011), *available at* http://www.gao.gov/new.items/d11513.pdf (hereinafter GAO, *Biofuels*) (explaining the various costs and risks that retailers are likely to face in selling intermediate ethanol blends).

The food group petitioners – GMA, AFFI, AMI, NCC, NCCR, NMA, NPPC, NTF, and SFA – represent entities that either produce, market, and distribute food items made from the grains (mostly corn) that will be diverted to produce more ethanol, or raise livestock that eat feed predominantly made up of such grains. The increased demand for grains that produce ethanol will result in a corresponding increase in grain prices. *See* 75 FR at 14,683 (Table I.B-1) (predicting at least an 8.2% increase in corn prices and a soybean price increase of 10.3%). Petitioners raised this very point in their comments to EPA opposing the E15 waiver request, as did their individual member organizations. *See, e.g.*, JA146-156 [R2,347.1] (NCC); JA599-615 [R2,717] (AFFI, GMA, NCCR, SFA, among others); JA616- 622 [R2,768.1] (AMI and NTF); JA129 [R523.1] (Tyson); JA144-145 [R1,321] (Simmons); JA526-531

[R2,678.1] (Smithfield); JA628-629 [R13,898] (Farbest).

It is the settled law of this Circuit that where any one petitioner has standing, the Court need not address the standing of the other petitioners. *See Military Toxics Project* v. *EPA*, 146 F.3d 948, 954 (D.C. Cir. 1998). Here, however, *all* Petitioners are directly affected by EPA's "partial waiver" decisions. The specific members of these organizations, identified in the Certificate of Parties, *supra*, will be harmed as here identified. Standing is therefore established.

ARGUMENT

[CONTENT OMITTED]

IV. EPA'S ACTIONS WERE ARBITRARY, CAPRICIOUS, AN ABUSE OF DISCRETION, OR OTHERWISE CONTRARY TO LAW.

[CONTENT OMITTED]

A. The Data On Which EPA Relied Failed To Justify The "Partial Waiver" Decisions.

EPA's partial waiver decisions were the product of arbitrary and capricious decisionmaking because the data on which EPA relied wholly failed to justify the "partial waivers."

First, EPA drew firm conclusions regarding all vehicle and engine types covered by the partial waivers without data to back up those conclusions. The DOE Catalyst Study critical to EPA's conclusions included just one test of many that commenters had identified

as vital components of any mid-level ethanol blend testing program. *See supra* at 10-11. *See also* GAO, *Biofuels* at 31-35, App. II (detailing the various federally funded tests evaluating the effects of mid-level ethanol blends). For instance, CRC presented a comprehensive eight-part testing program at a June 2008 meeting of stakeholders. (For an updated version of this presentation, see JA1,176 [R13,998.1, CRC Mid-level Ethanol Program Summary].) EPA's representations at that time concerning the testing that it planned to conduct were consistent with CRC's recommendations. *See* JA490-510 [R2,559.2, ALLSAFE cmt. (Ex. I)]. But EPA did not follow through on the recommended broader suite of testing, nor did it explain its decision not to conduct those additional tests.

Moreover, the DOE Catalyst Study used just one vehicle of each model type per year for each mileage accumulation fuel, regardless of the type of emissionscontrol system. JA70 [76 FR at 4,670]. But EPA's own in-use testing regulations do not permit test results using only one vehicle for each mileage accumulation fuel per model year. 40 C.F.R. § 86.1845-04(b)(3)-(c)(3). In-use compliance testing requires at least four vehicles for large-volume manufacturers. *Id.* at Table S04-07. Thus, the robust testing procedures required to prove that vehicle models and engines *meet* EPA standards were relaxed for purposes of assessing whether E15 will *cause* violation of those standards. The fact that EPA failed to follow its own guidelines is a hallmark of arbitrary and capricious decisionmaking.

EPA also concluded that NOx tailpipe emissions are expected to increase by 5 to 10% with use of E15

in both "newer Tier 2 motor vehicles as well as older motor vehicles." JA22 [75 FR at 68,111].[10] EPA concluded, however, that this increase should not be expected to result in violations of the applicable exhaust emissions standards because "Tier 2 motor vehicles generally have a significant compliance margin at the time of certification and later on in-use * * * that should allow them to meet their emission standards even if they experience the immediate NOx [emission] increases from E15 when compared to E0." JA7 [*Id.* at 68,096]. In other words, E15 will cause NOx emissions to go up, but in EPA's view, the relevant vehicle models "generally" have low enough emissions to still meet applicable standards.

Nowhere in the record does EPA provide data or an analysis that supports this sweeping conclusion. For example, EPA might have provided a list of relevant vehicle models, corresponding certification data, and a statistical analysis of whether the data for each affected vehicle model, in fact, provide a sufficient margin to accommodate an increase in NOx emissions. No such analysis was provided. EPA also might have shown how its more limited data on compliance margins could reliably be extrapolated to all vehicle models covered by the partial waivers. Even that sort of analysis was not provided. The best EPA can do is: (1) cite a study indicating that the *average* compliance margin for affected vehicle models is 50%; (2) offer non-specific information from EPA's in-use verification program; and (3) reiterate the limited emissions testing results provided by the DOE Cata-

---

[10] Tier 2 vehicles are those that meet the heightened emissions standards promulgated by EPA in 2000. *See* 65 FR 6,698 (Feb. 10, 2000).

lyst Study. JA22-23 [*Id.* at 68,111-12].[11] At best, this information supports the conclusion that *certain* vehicle models, or perhaps certain vehicles within a vehicle type, will be able to accommodate the predicted NOx emissions increase. It in no way supports a conclusion that *all* vehicle models covered by the partial waivers will continue to comply with applicable exhaust standards. And despite EPA's occasional elision over the statute's actual requirements, *see, e.g.*, JA23 [*id.* at 68,112] ("the immediate exhaust emissions effects by themselves would not cause motor vehicles to exceed their exhaust standards"); JA29 [*id.* at 68,118] ("any increase in permeation due to E15 should not be sufficient to cause Tier 2 motor vehicles to exceed their evaporative emission standards"); JA72 [76 FR at 4,672] ("[t]he immediate exhaust emission impacts of interest are any that are caused by E15"), the statute requires only that a fuel or fuel additive cause "*or contribute to*" a failure of any emissions-control device or system. There is no statutory requirement that E15, by itself, consume the entirety of any compliance margin and cause a violation.

Second, the few vehicle models selected for testing were chosen in a manner that leaves key gaps in the actual emissions testing data. EPA asserts that "several relevant criteria were used to determine the motor vehicle models selected" for the DOE Catalyst Study, including: (1) whether the vehicle was Tier 2-compliant; (2) manufacturer and sales/registration

---

[11] Neither the study cited nor the information in the in-use verification program were part of Growth's Waiver Application. Nor were they part of EPA's Federal Register Notice concerning the Application.

volumes; and (3) whether or not the vehicle applies learned fuel trim at wide-open throttle. JA16-17 [75 FR at 68,105-06].[12] But EPA makes it clear that the overall purpose of the study was to "evaluate the actual impacts of E15 on * * * Tier 2 motor vehicle models from *high sales volume models* of the various light-duty motor vehicle manufacturers." JA16 [*Id*. at 68,105] (emphasis added).

Yet, the record demonstrates that EPA was well aware that certain vehicle models have emissions-control systems that are particularly susceptible to damage from higher-level ethanol blends. *See* JA13 [*Id.* at 68,102]; JA1,545-1,679 [R14,036, DOE, Effect of Intermediate Ethanol Blends on Legacy Vehicles and Small Non-Road Engines, Report 1– Updated (Feb. 2009)]. For example, two studies identified early on by commenters[13] – the CRC Project No. E-87-1 Mid- Level Ethanol Blends Catalyst Durability Study Screening (June 2009), JA312-386 [R2,553 at 14], and the Australian Orbital Study, *see* JA413-414 [R2,559.1 at 22- 23] – revealed that certain vehicle models and engine types are much more likely to experience significant emissions increases when fueled with higher level ethanol blends than other vehicle and engine types with more advanced engine controls.[14] These tests revealed that engines and vehi-

---

[12] *See infra* at 49 n.15 for an explanation of "learned fuel trim."

[13] *See, e.g.*, JA249, 255-257 [R2,551, Alliance cmt., at 10, 16-18]; JA413-414 [R2,559.1, ALLSAFE cmt., at 22-23].

[14] *See, e.g.*, JA324 [R2,553, CRC E-87-1 Study, at 7] ("The Hyundai Accent was selected because it is a vehicle that displayed catalyst performance degradation on E20 in Australia that is also available in the US.").

cles that do not use "learned fuel trim" when using "open loop" air-to-fuel ratio controls[15] would be much more likely to expose the catalyst to high temperatures that can harm the catalyst and, as a result, cause increased emissions. These events lead to significantly higher rates of performance deterioration and thus increased emissions. Although commenters urged EPA to have DOE target such vehicles in the Catalyst Study, only a few of the susceptible vehicle models were included in DOE's testing – those with high sales volumes. *See* JA13 [75 FR at 68,102] (summarizing comments); JA16-17 [*Id.* at 68,105-06] (describing vehicle selection for DOE testing).

Thus, even though a fuel's contribution to the "failure" of vehicles and engines is the essence of the Section 211(f)(4) determination, EPA lacks actual emis-

---

[15] As EPA explains, the durability of the catalyst used to control vehicle emissions "is highly dependent on temperature." JA14 [75 FR at 68,103]. "Catalysts that exceed temperature thresholds will deteriorate at rates higher than expected, compromising the motor vehicles' ability to meet the required emission standards over their [full useful life]." *Id.* Most vehicle engines are equipped with "closed loop" engine controls, which detect the amount of oxygen in the exhaust and use that information to adjust the air to fuel ratio in the engine to assure "peak catalyst efficiency." JA16 [*Id.* at 68,105]. Open loop control occurs when the engine controller is not correcting the air-fuel ratio because the oxygen sensor is not supplying the data required to "close" the control loop. It typically happens

> when the vehicle is operating at higher throttle positions – precisely the time when uncompensated errors due to excessive ethanol can do the most damage. Engines with "learned fuel trim" can compensate for some of the potential problems associated with operation during periods of "open loop control."

sions testing data on some of the vehicle models proven to be most likely to suffer failures – lower sales volume vehicle models with open loop air-to-fuel ratio controls. EPA's failure to investigate this class of vehicle models was arbitrary and capricious.

Third, despite testing fewer than 20 vehicle models in support of the first waiver decision, testing only eight in support of its second waiver decision, and *not* testing all vehicle models known to have a propensity to fail when using ethanol-containing fuels, DOE's tests *still* produced failures using E15. *See* JA71 [76 FR at 4,671 (Table IV.A-2 & note)]. One vehicle tested, the MY2000 Honda Accord, failed to meet emission limits for NMOG. *Id.* (Table IV.A-2).[16] EPA could not dismiss that test result as not statistically significant, because it did not test a statistically significant number of vehicles in support of its second "partial waiver" decision. *See* JA66 [*Id.* at 4,666] ("DOE's [MY 2001-2006] test fleet does not include enough vehicles to allow the same statistical analysis conducted for MY2007 and newer light-duty motor vehicles").

EPA also *averaged* the test results for the 2002 Nissan Frontier for carbon monoxide. EPA asserted that the "*average* of composites met standards, but

---

[16] The same vehicle failed using E0. JA72 [76 FR at 4,672 (Table IV.A.3)]. EPA asserts that the failure of the E15 vehicle should be dismissed because "emissions of the E0 counterpart motor vehicle also exceeded the standard after only 25,000 miles of aging." JA70 [*Id.* at 4,670]. But this summary assertion provides no basis for dismissing the E15 test results. EPA has not explained *why* the vehicles failed; it therefore has provided no grounds for concluding that the failure in the E15 vehicle is not due to the fuel's ethanol content.

one test result exceeded standard[s]" for that vehicle. JA71 [*Id.* at 4,671 (Table IV.A-2 & note)] (emphasis added). But the statute is absolute. If "any" emissions-control system failed, as it did with one test result, the Administrator cannot reason away a clear emissions failure though "averaging" of multiple tests for a given vehicle. *See also infra* at 53-54 (discussing "averaging" technique and its inconsistency with agency practice).

EPA also ignored data in the record demonstrating additional failures. The preliminary test data from CRC as of July 2009 showed that two vehicles out of a small sample set of 25 had failed their emissions-control system tests. JA331 [R2,553, CRC E-87-1 Study, at 14]. The Alliance submitted this data in their comments. JA312-386 [R2,553].[17] EPA did not acknowledge those failures.

EPA also arbitrarily relied on flawed data from testing of the 2006 Nissan Quest. On the one hand, EPA explained that the "standard road cycle (SRC) was used for all aging" in the DOE Catalyst Study because "[t]his is a recommended EPA procedure that the manufacturers regularly use for verifying full useful life emissions capability." JA18 [75 FR at 68,107]. On the other hand, EPA observes that "[t]he Nissan Quest aging was changed part way through aging to a series of steady speed laps on the test track at TRC at DOE's direction to accelerate comple-

---

[17] API also continued to seek to supplement the record even after the publiccomment period closed with further updates and information about CRC's expansive test results. *See* JA1,157-73, 1,204-33, 1,245-78, 1,279-90, 1,688-775, 1,785-830 [R13,993, 14,003, 14,008.1, 14,010.1, 14,048, 14,053].

tion of this motor vehicle set." *Id.* EPA provides no explanation as to why the modified test protocol used for the Quest – a protocol inconsistent with EPA's own durability test procedures – produced data that are useful in assessing the potential impacts of fueling the Quest with E15. EPA's decision to rely on these data was patently arbitrary.

In sum, even assuming it was appropriate for *EPA* to shoulder the burden Section 211(f)(4) places on a waiver applicant, the Agency should have conducted the robust testing that it indicated was necessary in the summer of 2008 to evaluate the effects of E15. It did not. EPA should have aged and tested multiple vehicles of each model in compliance with its in-use testing protocol. It did not. EPA should have tested vehicle models that it had reason to believe were particularly susceptible to damage from higher ethanol blends based on industry data. It did not. EPA should have confronted the failure of emissions-control systems in the data on which it relied. It did not. And EPA should have justified its decision to use the Quest test results. It did not.

Thus, even assuming EPA has the authority to issue "partial" waiver decisions, the evidence demonstrated that vehicles within the *approved* group failed or would fail emissions tests; indeed, EPA itself concluded that violations of evaporative emission standards would occur. Yet EPA nevertheless granted the partial waiver. This is the very definition of arbitrary and capricious.

B. The Standard EPA Used For Recognizing Vehicle Emissions Failures Is Inconsistent With The Standard EPA Uses In Vehicle Certification.

[CONTENT OMITTED]

C. EPA Cannot "Offset" Actual Emissions Violations With Alleged Emissions Reductions.

[CONTENT OMITTED]

D. EPA's "Misfueling Mitigation Conditions" Might Not Prevent Misfueling.

Misfueling is yet another significant problem that EPA acknowledged in its waiver decisions. Although EPA imposes certain conditions on the partial waiver to mitigate misfueling – fuel pump dispenser labeling, a survey of fuel pump labeling and fuel samples, proper documentation of ethanol content on product transfer documents, and customer outreach, JA59-60 [76 FR at 68,148-49] – serious concerns still remain that such mitigation measures do not ameliorate this deficiency.

As far back as its Notice inviting comments on the Growth Application, EPA conceded that misfueling was a significant prospect, and that it had occurred in similar circumstances in the past. JA2 [74 FR at 18,229]. EPA also "acknowledge[d] that the issue of misfueling would be challenging in a situation where a conditional waiver is granted." JA3 [*Id.* at 18,230]. And EPA "recognize[d] that there may be legal and practical limitations on what a fuel manufacturer may be required or able to do to ensure compliance with the conditions of the waiver, including prevent-

ing misfueling." JA2 [*Id.* at 18,229].[22] Then again in its waiver decisions, EPA acknowledged that "[t]he potential for misfueling incidents may exist for several reasons," including "when E15 costs less than E10 or E0," and in those situations where it is "more difficult to find fuels other than E15." JA60 [75 FR at 68,149].

EPA sought to mitigate the potential for misfueling (at least until the promulgation of a separate misfueling mitig tion regulation) by imposing certain conditions on those seeking to introduce E15 into commerce. *See* JA57 [*id.* at 68,146]. But these conditions do not apply to anyone other than fuel and fuel additive manufacturers, as EPA recognized. *Id.* This means that the conditions that EPA claims will initially prevent misfueling do not "apply directly to various downstream parties, such as a retailer who is not also a fuel or fuel additive manufacturer." *Id.*

And what is more, the conditions that EPA does impose, such as "fuel pump dispenser labeling" and "public outreach," JA59 [*id.* at 68,148], have been shown to be ineffective in preventing misfueling in the past. JA2 [74 FR at 18,229] (acknowledging that customers have in the past engaged in intentional misfueling despite labeling); JA393-394 [R2,559.1 at 2-3] (documenting the same).[23] Multiple comment-

---

[22] Courts have held that an agency action is arbitrary and capricious if it is unenforceable, as the misfueling conditions clearly will be, insofar as compelling gasoline consumers to use the proper fuel. *New York* v. *EPA*, 413 F.3d 3, 35 (2d Cir. 2005).

[23] EPA also imposed two other conditions, a "fuel pump labeling and fuel sample survey" and "proper documentation of ethanol content on product transfer documents." JA59 [75

ers, including the U.S. Coast Guard, NMMA, ALLSAFE, OPEI, and the Alliance, all explained that there could be a likelihood of engine and vehicle emission-control system failures due to the use of E15, and that merely putting precautionary language on a label affixed to a gasoline pump might not prevent misfueling, which could lead to these serious problems. JA157-158, 532- 567, 387-433, 1,291-96, 236-311 [R2,503.1, 2,679.1, 2,559.1, 14,011.1, 2,551].

Therefore, the conditions that EPA imposes on the partial E15 waiver are potentially ineffective in preventing misfueling. Because the prevention of misfueling is necessary to "allow for effective implementation of a partial waiver," *see* JA59 [75 FR at 68,146], EPA's decision to permit such mitigation measures – while at the same time allowing the introduction of E15 into commerce – renders the partial E15 waiver arbitrary, capricious, an abuse of discretion, and contrary to law.

CONCLUSION

[CONTENT OMITTED]

FR at 68,148]. Neither of those is likely to prevent customers from misfueling their vehicles, boats, or non-road engines.

APPENDIX 9

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

NO. 10-1380

FILED On: October 25, 2011

GROCERY MANUFACTURERS
OF AMERICA, ET AL.,
PETITIONERS

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

Consolidated with 10-1414, 11-1002, 11-1046,
11-1072, 11-1086

On Petitions for Review from the Environmental
Protection Agency

FINAL REPLY BRIEF FOR PETITIONERS

[CONTENT OMITTED]

STANDING

EPA concedes that the Court has jurisdiction over this case, and therefore that Petitioners have standing. See EPA Br. 1. This is consistent with its longstanding treatment of many of the individual petitioners as "stakeholders" in Section 211(f)(4) waiver decisions. See id. at 6-7, 10, 35 n.8, 42-43, 49; JA44-45 [75 FR 68,094, 68,133-34 & n.109 (Nov. 4, 2010)]. But Growth contends that Petitioners have demonstrated neither Article III nor prudential standing. *See* Growth Br. 3. Growth is wrong on both counts.[1]

I. PETITIONERS HAVE ARTICLE III STANDING.

The bulk of Growth's Article III argument "is nothing more than an effort to bootstrap standing analysis to issues that are controverted on the merits." *Southern Cal. Edison Co. v. FERC*, 502 F.3d 176, 180 (D.C. Cir. 2007) (citation omitted). Growth dismisses as "speculative" that E15 will cause engine failures and emissions standards violations, and that consumers will misfuel with E15. Growth Br. 4-6. But as this Court has held, "in reviewing the standing question, the court must be careful not to decide the questions on the merits * * * and must * * * assume that * * * the petitioner would be successful in its claims."

---

[1] Growth argues in a footnote (at 19 n.2) that this Court should consider the standing of each of the petitioner groups separately. But Petitioners have filed one joint brief, and where one petitioner has standing, all have standing. *See Military Toxics Project v. EPA*, 146 F.3d 948, 954 (D.C. Cir. 1998).

Southern Cal. Edison Co., 502 F.3d at 180 (brackets and citation omitted).

In any event, the record is replete with studies demonstrating the harmful effects of E15 on vehicles and engines. Indeed, EPA summarized some of these studies in its first waiver decision. *See, e.g.*, JA34 [75 FR at 68,123] (describing studies provided by Honda and the CRC). Commenters referenced the common occurrence, during the transition from leaded to unleaded fuel, of *intentional* misfueling by customers, even where physical barriers were in place to prevent misfueling (which are not required for E15). *See* JA393 [R2,559.1, ALLSAFE cmt., at 2] (citing 49 FR 31,032, 31,034 (Aug. 2, 1984)).

Misfueling and engine failures are hardly "speculative." The injury Petitioners will suffer as a result is being subjected to potential penalties and liabilities under facially applicable CAA provisions and having to defend against them. *See, e.g.*, 42 U.S.C. § 7541(c)(1). Whether there are meritorious defenses available to them is beside the point.

Growth's argument concerning the petroleum group is, at best, disingenuous. While Growth seeks to characterize selling E15 as completely "voluntary," its past statements indicate a different view. In submitting its application, Growth labeled the waiver as "Necessary to Meet Federal Law and Important Governmental Objectives" and stated that "[f]ailure to remove the blend barrier will result in an insufficient supply of ethanol to meet the renewable fuel mandates of EISA 2007." *See* JA84-85 [R2, Cover Letter, at 1-2].

EPA's partial waiver will effectively require petroleum group members to expend enormous resources

to introduce E15 into commerce. *See* Pet. Br. 4-5, 19. EPA has concluded that "[t]o the extent it is used in the marketplace, E15 would likely replace the use of E10." JA80 [76 FR 4,662, 4,680 (Jan. 26, 2011)]. Specialized transportation, handling, and fuel segregation efforts will be necessary. *See, e.g.*, JA226, 227-229 [R2,550, NPRA cmt., at 19, 20-22]; JA575-577 [R2,680.3, API cmt., at 6-8]. Additional costs imposed by the introduction of E15 and the increased likelihood of liability are thus anything but speculative.

The food petitioners also plainly have standing. EPA has predicted that corn prices will increase as a result of the new RFS standards, despite the limit on the amount of corn starch ethanol that may be counted toward the requirement. *See* 75 FR 14,670, 14,683 (Mar. 26, 2010) (Table I.B-1). The so-called "blend wall" limits the amount of corn that is now being diverted to ethanol for production of E10. The E15 waiver eliminates the E10 blend wall, which will increase diversion – and increase corn prices.

II. PETITIONERS HAVE PRUDENTIAL STANDING.

[CONTENT OMITTED]

III. EPA'S WAIVER DECISIONS WERE NEITHER RATIONALLY SUPPORTED BY THE RECORD NOR ADEQUATELY EXPLAINED.

[CONTENT OMITTED]

A. EPA Cherry-Picked The Studies That Would Serve As The Basis Of Its Waiver Decisions.

[CONTENT OMITTED]

B. The Vigor Of Testing In The DOE Catalyst Study Did Not Compare To That Required In Analogous Regulatory Contexts.

[CONTENT OMITTED]

C. EPA Improperly Dismissed Or Averaged Away Unfavorable Test Results.

[CONTENT OMITTED]

D. EPA's Policy Objectives Do Not Overcome The Evaporative Emissions Failures That Are Likely To Result From E15.

[CONTENT OMITTED]

E. EPA's Misfueling Mitigation Conditions Are Arbitrary And Capricious Because Similar Measures Have Proven Ineffective In The Past.

EPA suggests that its misfueling mitigation measures in the E15 waiver are necessarily reasona-

ble because they were modeled after those used for the introduction of Ultra Low Sulfur Diesel ("ULSD"). EPA Br. 65. But the two fuels are fundamentally different. ULSD was "backwards compatible," meaning it could be used in all existing diesel-fuel vehicles. E15 is not; it may cause engine failures in a wide range of existing vehicles and engines. JA434-447 [R2,559.2, ALLSAFE cmt. (Ex. A)]. Thus, ULSD does not provide an analogous model for successful misfueling measures.

EPA criticizes Petitioners for arguing that the E15 waiver conditions may be ineffective. EPA Br. 65. Yet, as Petitioners previously explained, *EPA itself* recognized in its NPRM that misfueling was a significant prospect, and that it had occurred during the transition from leaded to unleaded fuel. Pet. Br. 58 (citing JA2 [74 FR 18,228, 18,229 (Apr. 21, 2009)]). And *EPA* has noted that mitigation measures have been shown to be ineffective in preventing misfueling in the past. *Id.* at 59 (citing JA2 [74 FR at 18,229]). *See also* JA393 [R2,559.1 at 2] (citing 49 FR at 31,034).

Ignoring this detail, EPA instead argues that the finalized misfueling rule "moot[s]" many of Petitioners' arguments concerning the efficacy of the waiver conditions. EPA Br. 64-65. But the misfueling rule was not finalized when the waiver decisions were issued; indeed, EPA even rejected commenters' suggestion that "EPA should *first* conduct and finalize a rulemaking under section 211(c) to mitigate the potential for misfueling and limit the types of mobile sources for which E15 may be used." JA54 [75 FR at 68,143] (emphasis in original). EPA could not rely on

a *future* rule to justify its decisions. *See* Pet. Br. 37 n.7. Its decision was thus arbitrary and capricious.

CONCLUSION

[CONTENT OMITTED]