in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4); 40
• Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999); 59
• Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997); 28
• Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28935, May 22, 2001); 40
• Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act; and 28355
• Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994). 33
In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52
Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: March 20, 2018.
Edward H. Chu,
Acting Regional Administrator, Region 5.
[FR Doc. 2018–06368 Filed 3–28–18; 8:45 am]
BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY
40 CFR Part 79
Registration of Isobutanol as a Gasoline Additive: Opportunity for Public Comment

AGENCY: Environmental Protection Agency (EPA).

ACTION: Request for information.

SUMMARY: The Environmental Protection Agency ("EPA" or "the Agency") is seeking public comment on any aspect of the use of isobutanol in gasoline. Butamax Advanced Biofuels, LLC ("Butamax"), a manufacturer of isobutanol, has submitted an application pursuant to the regulations titled "Registration of Fuels and Fuel Additives" for the registration of isobutanol as a gasoline additive at up to 16 volume percent. Butamax has submitted information that likely satisfy the applicable registration requirements. The Clean Air Act requires the EPA to register a fuel or fuel additive once all the applicable registration requirements have been met by the manufacturer. Due to the potential for the widespread introduction of isobutanol into the Clean Air Act to further protect public health and welfare.

DATES: Comments must be received on or before April 30, 2018.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2018–0131, to the Federal eRulemaking Portal: https://www.regulations.gov. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or withdrawn. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will in general not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit https://www.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION CONTACT: James W. Caldwell, Environmental Engineer, Compliance Division, Office of Transportation and Air Quality, Mail Code 6405A, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460; Telephone: (202) 343–9303; Fax: (202) 343–2802; Email address: caldwell.jim@epa.gov.

SUPPLEMENTARY INFORMATION: The EPA is seeking public comment on any aspect of the use of isobutanol in gasoline. Butamax Advanced Biofuels, LLC ("Butamax"), a manufacturer of isobutanol, has submitted an application pursuant to the regulations at 40 CFR part 79, Registration of Fuels and Fuel Additives, for the registration of isobutanol, an alcohol, as a gasoline additive at up to 16 volume percent. Our review of the information Butamax has submitted leads us to believe that Butamax would likely satisfy the applicable registration requirements under 40 CFR part 79 (discussed in more detail below). Section 211(b) of the Clean Air Act (Clean Air Act,CAA or the Act) requires the EPA to register a fuel or fuel additive once all the applicable registration requirements have been met by the manufacturer. While the EPA does not have any specific concerns, due to the potential for the widespread introduction of isobutanol into commerce, we are taking steps to make the public aware of the likelihood of this registration and are seeking public comment regarding any issues we should take into consideration for this registration and any supplemental actions we should consider under the Clean Air Act to further protect public health and welfare.

I. Statutory and Regulatory Background
Section 211(a) and (b)— Fuels and Fuel Additives Designation and Registration

Section 211(a) of the Act authorizes the Administrator to designate fuels and fuel additives (F/FAs) by regulations and, once designated, to register such F/FAs prior to introduction into commerce. To date, the Administrator has designated on-highway motor vehicle gasoline and gasoline additives and on-highway motor vehicle diesel and diesel additives for registration. The EPA codified the registration requirements under Sections 211(b) and 211(e) of the Act at 40 CFR part 79. Registration requirements at 40 CFR part 79 include emissions specification testing and a literature search of the associated emissions (Tier 1 testing) and animal testing of exposure to emissions for purposes of determining health effects (Tier 2 testing). Manufacturers with less than $50 million in total annual sales are considered small businesses, as specified in the regulations at 40 CFR 79.58(d). In certain cases, a small
business is exempt from some or all of these testing requirements. For any potential registrant with $50 million or more in total annual sales, Tier 1 and Tier 2 requirements must be met before registration.

In addition, §§79.11(i) and 79.21(h) respectively require that fuel and fuel additive manufacturers demonstrate that their fuels and fuel additives are substantially similar to those used in emissions certification or have a waiver as part of 40 CFR part 79 registration. The Tier 1 registration regulations at 40 CFR 79.52 require a characterization of the emission products that are generated by evaporation and combustion of a gasoline with, if applicable, an oxygenated additive such as isobutanol. Combustion testing must be conducted with and without after-treatment of exhaust emissions. A literature search for information on the potential toxicological environmental, and other public welfare effects is required for emission products, except that it is not required for those emission products that are the same as the emission products for baseline gasoline (represented in testing by a gasoline with no oxygenates such as ethanol or isobutanol). This is because a test group organized by the American Petroleum Institute (API) has tested baseline gasoline and also conducted the literature search for its emission products. The results of this testing and literature search were reported in the 1997 API baseline gasoline Tier 1 literature review.

The regulations at 40 CFR 79.53 specify the requisite health effects testing for compliance with Tier 2 as well as provisions for a manufacturer that opts to rely on existing health effects test data to satisfy these testing requirements. Additionally, the flexibility to modify Tier 2 requirements and to require Alternative Tier 2 testing can be found at 40 CFR 79.58(c). In 1998, EPA opted to modify the standard Tier 2 testing requirements for gasoline and various oxygenated gasoline blends and issued Alternative Tier 2 testing requirements to the API “Section 211(b) Research Group.” This was based on the EPA’s determination that alternative test procedures would yield more useful data than standard Tier 2 testing. The primary difference between the testing for baseline gasoline and various oxygenated gasoline blends, under the Alternative Tier 2 and standard Tier 2 testing requirements, was that the Alternative Tier 2 testing focused on identifying and evaluating potential adverse health impacts of evaporative emissions. It did not include examination of combustion emissions.

At the time, the EPA explained the rationale for focusing on evaporative emissions and why the combustion emission studies would likely not produce meaningful information as being due to methodological complications caused by carbon monoxide (i.e., the carbon monoxide component of the combustion exhaust emissions may be lethal or otherwise compromise the health of the test animals). The EPA required specific testing for baseline gasoline and various oxygenated gasoline blends and these health studies have now been largely completed and approved.

The regulations at 40 CFR 79.54 provide for additional testing under Tier 3 provisions if the Tier 1 and Alternative Tier 2 data or other data obtained by the Agency indicates that such testing is warranted. The EPA has yet to initiate a Tier 3 process for any fuel or fuel additive. If the EPA were to require Tier 3 testing, we would develop the testing protocol and requirements through a public process.

CAA Section 211(f)—Substantially Similar and Waivers

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 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 EPA 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 considered “substantially similar” to the unleaded gasoline utilized in the EPA’s emissions certification program by placing limits on a gasoline’s chemical composition and its physical properties, including the amount of alcohols and ethers (oxygenates) that may be added to gasoline. Gasoline and diesel fuels that are found to be “substantially similar” to the unleaded gasoline utilized in the EPA’s emissions certification program by placing limits on a gasoline’s chemical composition and its physical properties, including the amount of alcohols and ethers (oxygenates) that may be added to gasoline. Gasoline-isobutanol blends containing up to 16 volume percent isobutanol would contain up to 3.7 percent oxygen by weight, which exceeds the allowable limit for oxygen content under the current “substantially similar” interpretive rule, and would require 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 CAA 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 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 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.

In addition, the regulations at §§79.11(i) and 79.21(h) require that fuel and fuel additive manufacturers must demonstrate that their fuels and fuel additives, respectively, are substantially similar or have a waiver as described in section 211(f) of the Act.

CAA Section 211(c)—Rulemaking To Regulate Fuels

Section 211(c)(1) of the Act allows the Administrator, by regulation, to “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 (A) if, in the judgment of the Administrator, any fuel or fuel additive or any emission product of such fuel or fuel additive causes, or contributes to, air pollution or water pollution (including any degradation in the quality of groundwater) that may reasonably be anticipated to endanger the public health or welfare, or (B) if emission products of such fuel or fuel additive will impair to a significant degree the performance of any emission control device or system which is in general use, or which the Administrator
finds has been developed to a point
where in a reasonable time it would be
in general use were such regulation to
be promulgated.” Prior to doing so, the
EPA must consider scientific and
medical evidence as well as the costs of
any control and setting regulations
under Section 202 of the Act. The EPA
must also publish a finding that a
control or prohibition will not result in
the use of other substitute fuels or fuel
additives that will also endanger public
health or welfare.

II. Registration of Isobutanol

Isobutanol Background

Isobutanol is a flammable colorless
liquid that is used as a gasoline additive
and as an industrial solvent. Isobutanol
is composed of the chemical elements
hydrogen, oxygen, and carbon and it can
be made from petroleum or renewable
biomass, such as corn, grasses,
agricultural waste and other renewable
sources. It can be used in internal
combustion engines as an additive to
gasoline and is registered under the 40
CFR part 79 as a gasoline additive for
manufacturers that are exempt from the
Tier 1 and Alternative Tier 2 testing. A
blend level of 16 percent for a non-
exempt manufacturer would require a
new registration that would include
meeting Tier 1 and Alternative Tier 2
health effects testing requirements and a
waiver under CAA section 211(f)(4).
Biobutanol is the common name for
isobutanol made from renewable
sources.

There has been an increased interest
in the use of biobutanol as a direct
result of the requirements for increased
use of renewable fuel volumes, adopted
in the Energy Information and Security
Act of 2007. These provisions require an
increase in the use of renewable fuels, with 36 billion gallons of renewable fuel
to be used in the U.S. by 2022. Parties
required to meet these standards are
interested in cost effective and practical
ways to satisfy the standards and meet
the performance needs of the vehicles
and engines. Biobutanol is one
potentially attractive option because of
its higher energy density, lower
blending vapor pressure, and lower heat
of vaporization in comparison to other
alcohols such as ethanol.

Current Isobutanol Registrations

As previously discussed, regulations
at 40 CFR 79.58(d) specify that a
company with total annual sales of less
than $50 million is a small business and
is exempt in certain instances from
applicable testing requirements. The EPA
has registered isobutanol as a fuel
additive for companies that qualified
under this provision.

Fuel and fuel additive manufacturers
with total annual sales of $50 million or
greater do not qualify as small
businesses, are prohibited from
registering the use of isobutanol
produced by small businesses, and
instead must comply with all applicable
registration requirements, including
health effects testing. Gasoline
manufacturers typically have sales
greater than $50 million per year and
would need to register isobutanol as an
additive to their gasoline if they wanted
to use it. Therefore, a gasoline
manufacturer cannot rely on the
registration of a small additive
manufacturer as a means of complying
with the 40 CFR part 79 registration
requirements. Additionally, because no
gasoline manufacturer has completed
the 40 CFR part 79 registration
requirements, including required health
effects testing for isobutanol, the agency
has yet to grant a registration request for
isobutanol as an additive to gasoline by
a gasoline manufacturer. This has
resulted in limiting isobutanol to
blending at terminals by parties that are
not gasoline manufacturers. See the
definition of fuel manufacturer at 40
CFR 79.21(h). For this reason, among
others, isobutanol has yet to be
introduced into commerce in any
significant volume.

Butamax—Isobutanol Registration

Butamax Advanced Biofuels, LLC
(Butamax) has applied for registration of
the use of up to 16 percent by volume
isobutanol as a fuel additive in
motor-vehicle gasoline.2 As discussed above,
fuels and fuel additives to motor-vehicle
gasoline are required to be registered by
the EPA under 40 CFR part 79 prior to
introduction into commerce. As
previously described, there are two
main requirements for the fuel or fuel
additive manufacturer. First, the fuel or
fuel additive must be substantially
similar to fuel additives used in
emissions certification, or, if not, have
a waiver under CAA section 211(f)(4)
(42 U.S.C. 7545(f)(4), 40 CFR 79.21(h)). A
fuel containing a blend of gasoline and
16 percent isobutanol is not
substantially similar to any EPA
certification fuels so Butamax must
operate via a waiver under CAA section
211(f)(4) prior to registration. The EPA
allows manufacturers to use previously
granted waivers if they can satisfy the
waiver’s terms and conditions. Of

2 Ethanol is allowed in gasoline at up to 15
percent by volume for certain vehicles. Isobutanol
at 16 percent by volume would not have a vehicle
restriction.

relevance here is the OCTAMIX waiver,
which the EPA granted on February 8,
1988,3 and has since modified the
waiver on October 28, 1988,4 June 7,
2012,5 and June 14, 2012.6 The waiver
allows a variety of alcohols in gasoline,
including isobutanol, at up to 3.7
percent oxygen by weight. For a
gasoline with a typical density, this
equals to a maximum of 16 percent
isobutanol by volume when no other
oxgenates are present. Butamax has
stated that it intends to produce the
isobutanol fuel additive for use in
accordance with the OCTAMIX waiver.
Butamax must show that it will comply
with all seven conditions in the
OCTAMIX waiver to be able to rely on
that waiver to satisfy the registration
requirement at 40 CFR 79.21(h). The
Agency has evaluated Butamax’s March
25, 2011 submission regarding
ButamaxTM Advanced Biofuels LLC and
its application of the OCTAMIX Waiver
for use of up to 16 volume percent isobutanol
as a fuel additive if blended with
gasoline and agrees with its evaluation
that Butamax can meet all seven
conditions specified in the OCTAMIX
waiver.

Second, a manufacturer must conduct
Tier 1 and either Tier 2 or Alternative
Tier 2 health-effects testing, unless the
manufacturer is exempt under the
small-business provisions specified at
40 CFR 79.58(d). Butamax does not
qualify as a small business and is not
exempt from these testing requirements.
Additionally, the regulations at 40 CFR
79.53(b) allow a manufacturer to rely on
existing health effects test data that
would provide “reasonably
comparable” information in lieu of
conducting health effects testing
“regarding the carcinogenicity,
mutagenicity, neurotoxicity,
teratogenicity, reproductive/fertility
measures, and general toxicity effects of
the emissions for a fuel or additive” for
registration. The Agency’s current
review leads it to believe that Butamax
will likely meet the requisite health
effects testing requirements for
isobutanol at 16 percent through its
submittal of information on testing for
the health effects end points identified
under Alternative Tier 2 testing
procedures for oxygenates.7 Similarly,
the Agency also believes that Butamax
will likely meet the other requirements
for registration on EPA Form 3520–13,

3 See 53 FR 3636 (February 8, 1988).
4 See 53 FR 4768 (October 28, 1988).
5 See 77 FR 33733 (June 7, 2012).
6 See 77 FR 35677 (June 14, 2012).
7 Letter to Dr. Carol Henry, American Petroleum
Institute, from Margo Oge, U.S. EPA, November 2,
1998.
Fuel Additive Manufacturer Notification.

III. Recent Studies Regarding Isobutanol Blended Gasolines

The OCTAMIX waiver evaluated a number of 1980s gasoline-fueled vehicles on the effects of gasoline-alcohol mixtures (applicable to isobutanol at up to 16 percent by volume) on those vehicles emissions controls. Since then, studies have been conducted to evaluate the potential effects of isobutanol on gasoline-fueled vehicles, engines, and fuel dispensing and storage equipment. Recent testing on the use of gasoline-isobutanol blended fuels illustrates that isobutanol-blended fuels generally do not significantly affect oxides of nitrogen (NOx), carbon monoxide (CO), or non-methane organic gas (NMOG) emissions. In a recent study, gasoline was splash blended with alcohols to produce four blends with a target value of 5.5 percent oxygen by weight including a gasoline-isobutanol blend of 21 volume percent isobutanol. The study found that the gasoline-isobutanol blended fuel did not significantly affect NOx, CO, or NMOG emissions.

In a test of isobutanol exposure impacts on fueling infrastructure materials, the observed swell for elastomers for exposures to 16 percent and 24 percent gasoline blends were similar to but slightly less than the oxygen equivalent ethanol fuels of E10 and E17. Samples of metals commonly found in fuel storage and dispensing systems were immersed in 16 percent and 24 percent isobutanol blends at 60 °C for 28 days. In all cases, the annualized corrosion rates for isobutanol based on weight loss were negligible.

Finally, in a 50-hour field emissions test of 175 horsepower and 215 horsepower boating engines, 16.1 volume percent isobutanol (blended to 93 octane) showed similar total HC+NOx emissions compared to a non-oxygenated certification gasoline. In that same test, CO emissions were reduced using isobutanol vs. indolene which was expected as isobutanol is a partially oxidized fuel. The enleanment reported for 16.1 percent isobutanol was in line with what is typical of E10 relative to indolene. The study noted that no operability issues were observed while the marine engines were operated on the gasoline-isobutanol blended fuels. The Agency believes that based on the referenced studies on the potential effects of isobutanol on gasoline-fueled vehicles and engines and its engineering judgement, that modern motor vehicles and engines should continue to meet emissions standards and suffer no issues with driveability or operability on gasoline-isobutanol blended fuels up to 16 volume percent. However, even though the information cited above concerning regulated emissions, retail fuel dispensing and storage equipment materials, and marine engines suggests that isobutanol blended into gasoline should not pose any significant issues, the narrowness of the size and scope of these studies does not address all potential effects isobutanol may have on gasoline-fueled vehicles and engines.

Therefore, the Agency seeks comment on whether there is available information on other areas that should be addressed for gasoline-isobutanol blended fuels up to 16 volume percent. The Agency could use information gleaned from this public comment process to determine whether further controls might be necessary (potentially via rulemaking under section 211(c) of the Act) to help ensure the smooth introduction of isobutanol into the gasoline market or to help determine whether the Agency should impose certain conditions on the registration of isobutanol as a gasoline additive through 40 CFR part 79.

IV. Conclusion

The EPA will register isobutanol for Butamax in accordance with the regulations at 40 CFR part 79 once applicable requirements are met. Butamax has submitted the required information, including: (1) The specification of exhaust and evaporative emissions for gasoline with 16 percent isobutanol (Tier 1 testing), (2) a literature search for health information on the Tier 1 emissions found for that blend that were not found in the Tier 1 testing of gasoline without any oxygenate, and (3) the results of the Alternative Tier 2 health-effects testing for that blend (animal exposure to evaporative emissions). Butamax has also submitted information to demonstrate that it can comply with the requirements of the OCTAMIX waiver, which allows the blending of isobutanol into gasoline at up to 3.7 percent oxygen by weight, or 16 percent isobutanol by volume.

The EPA seeks comments and any information and data on the use of isobutanol in gasoline, including, but not limited to: (1) The need for additional health-effects testing under the Tier 3 provisions in the regulations, and (2) the need for additional regulatory controls for 16 percent isobutanol in gasoline, beyond those for gasoline at 40 CFR parts 79 and 80, under the authority of CAA section 211(c).


Byron J. Bunker
Director, Compliance Division, Office of Transportation and Air Quality, Office of Air and Radiation.

[FR Doc. 2018–06119 Filed 3–28–18; 8:45 am]
BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 15, 73, 74, and 76

[GN Docket No. 16–142; Report No. 3088]

Petitions for Reconsideration of Action in Rulemaking Proceeding

AGENCY: Federal Communications Commission.

ACTION: Petitions for Reconsideration.

SUMMARY: Petitions for Reconsideration (Petitions) have been filed in the Commission’s Rulemaking proceeding by Rick Chessen, on behalf of NCTA—The Internet & Television Association (“NCTA”) and Michael Nilsson, on behalf of American Television Alliance (ATVA).

DATES: Oppositions to the Petition must be filed on or before April 13, 2018. Replies to an opposition must be filed on or before April 23, 2018.


FOR FURTHER INFORMATION CONTACT: Evan Baranoff, Media Bureau, Policy Division, at: (202) 418–2120; email: Evan.Baranoff@fcc.gov.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission’s document, Report No. 3088, released March 22, 2018. The full text of the Petition is available for viewing and