year, the Judges shall adjust the royalty fee payable under Section 119(b)(1)(B) ''to reflect any changes occurring in the cost of living as determined by the most recent Consumer Price Index (for all consumers and for all items) [CPI–U] published by the Secretary of Labor before December 1 of the preceding year.'' Section 119 also requires that ''[n]otification of the adjusted fees shall be published in the **Federal Register** at least 25 days before January 1.'' 17 U.S.C. 119(c)(2).

The change in the cost of living as determined by the CPI–U during the period from the most recent index published before December 1, 2017, to the most recent index published before December 1, 2018, is 2.5%.[2] Application of the 2.5% COLA to the current rate for the secondary transmission of broadcast stations by satellite carriers for private home viewing—28 cents per subscriber per month—results in a rate of 29 cents per subscriber per month (rounded to the nearest cent). *See* 37 CFR 386.2(b)(1). Application of the 2.5% COLA to the current rate for viewing in commercial establishments—58 cents per subscriber per month—results in a rate of 59 cents per subscriber per month (rounded to the nearest cent). *See* 37 CFR 386.2(b)(2).

List of Subjects in 37 CFR Part 386

Copyright, Satellite, Television.

Final Regulations

In consideration of the foregoing, the Judges amend part 386 of title 37 of the Code of Federal Regulations as follows:

PART 386—ADJUSTMENT OF ROYALTY FEES FOR SECONDARY TRANSMISSIONS BY SATELLITE CARRIERS

■ 1. The authority citation for part 386 continues to read as follows:

Authority: 17 U.S.C. 119(c), 801(b)(1).

■ 2. Section 386.2 is amended by adding paragraphs (b)(1)(x) and (b)(2)(x) to read as follows:

§ 386.2 Royalty fee for secondary transmission by satellite carriers.

* * * * *

(b) * * *

(1) * * *

(x) 2019: 29 cents per subscriber per month.

(2) * * *

(x) 2019: 59 cents per subscriber per month.

Suzanne M. Barnett,

Chief Copyright Royalty Judge.

[FR Doc. 2018–25907 Filed 11–27–18; 8:45 am]

BILLING CODE 1410–72–P

[2] On November 14, 2018, the Bureau of Labor Statistics announced that the CPI–U increased 2.5% over the last 12 months.

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 51

[EPA–HQ–OAR–2017–0175; FRL–9987–02–OAR]

RIN 2060–AT52

Air Quality: Revision to the Regulatory Definition of Volatile Organic Compounds—Exclusion of cis-1,1,1,4,4,4-hexafluorobut-2-ene (HFO–1336mzz–Z)

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: On May 1, 2018, the U.S. Environmental Protection Agency (EPA) published a proposed rule seeking comments in response to a petition requesting the revision of the EPA's regulatory definition of volatile organic compounds (VOC) to exempt *cis*-1,1,1,4,4,4-hexafluorobut-2-ene (also known as HFO–1336mzz–Z; CAS number 692–49–9). The EPA is now taking final action to revise the regulatory definition of VOC under the Clean Air Act (CAA). This final action adds HFO–1336mzz–Z to the list of compounds excluded from the regulatory definition of VOC on the basis that this compound makes a negligible contribution to tropospheric ozone (O_3) formation.

DATES: This final rule is effective on January 28, 2019.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2017–0175. All documents in the docket are listed on the *https://www.regulations.gov* website. Although listed in the index, some information is not publicly available, *e.g.,* Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted materials, is not placed on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through *https://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Dr. Souad Benromdhane, Office of Air Quality Planning and Standards, Health and Environmental Impacts Division, Mail Code C539–07, Environmental Protection Agency, Research Triangle Park, NC 27711; telephone: (919) 541–4359; fax number: (919) 541–5315; email address: *benromdhane.souad@epa.gov*.

SUPPLEMENTARY INFORMATION:

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I. Does this action apply to me?

Entities potentially affected by this final rule include, but are not necessarily limited to, the following: State and local air pollution control agencies that adopt and implement regulations to control air emissions of VOC; and industries manufacturing and/or using HFO–1336mzz–Z for use in polyurethane rigid insulating foams, refrigeration, and air conditioning. Potential entities that may be affected by this action include:

TABLE 1—POTENTIALLY AFFECTED ENTITIES BY NORTH AMERICAN INDUSTRIAL CLASSIFICATION SYSTEM (NAICS) CODE

Category	NAICS code	Description of regulated entities
Industry	326140	Polystyrene Foam Product Manufacturing.
Industry	326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing.
Industry	333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing.
Industry	3363	Motor Vehicle Parts Manufacturing.
Industry	336611	Ship Building and Repairing.
Industry	336612	Boat Building.
Industry	339999	All other Miscellaneous Manufacturing.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities that might be affected by this deregulatory action. This table lists the types of entities that the EPA is now aware of that could potentially be affected to some extent by this action. Other types of entities not listed in the table could also be affected to some extent. To determine whether your entity is directly or indirectly affected by this action, you should consult your state or local air pollution control and/or air quality management agencies.

II. Background

A. The EPA's VOC Exemption Policy

Tropospheric O_3, commonly known as smog, is formed when VOC and nitrogen oxides (NO_X) react in the atmosphere in the presence of sunlight. Because of the harmful health effects of O_3, the EPA and state governments limit the amount of VOC that can be released into the atmosphere. VOC form O_3 through atmospheric photochemical reactions, and different VOC have different levels of reactivity. That is, different VOC do not react to form O_3 at the same speed or do not form O_3 to the same extent. Some VOC react slowly or form less O_3; therefore, changes in their emissions have limited effects on local or regional O_3 pollution episodes. It has been the EPA's policy since 1971, that certain organic compounds with a negligible level of reactivity should be excluded from the regulatory definition of VOC in order to focus VOC control efforts on compounds that significantly affect O_3 concentrations. The EPA also believes that exempting such compounds creates an incentive for industry to use negligibly reactive compounds in place of more highly reactive compounds that are regulated as VOC. The EPA lists compounds that it has determined to be negligibly reactive in its regulations as being excluded from the regulatory definition of VOC (40 CFR 51.100(s)).

The CAA requires the regulation of VOC for various purposes. Section 302(s) of the CAA specifies that the EPA has the authority to define the meaning of ''VOC'' and, hence, what compounds shall be treated as VOC for regulatory purposes. The policy of excluding negligibly reactive compounds from the regulatory definition of VOC was first laid out in the ''Recommended Policy on Control of Volatile Organic Compounds'' (42 FR 35314, July 8, 1977) (from here forward referred to as the 1977 Recommended Policy) and was supplemented subsequently with the ''Interim Guidance on Control of Volatile Organic Compounds in Ozone State Implementation Plans'' (70 FR 54046, September 13, 2005) (from here forward referred to as the 2005 Interim Guidance). The EPA uses the reactivity of ethane as the threshold for determining whether a compound has negligible reactivity. Compounds that are less reactive than, or equally reactive to, ethane under certain assumed conditions may be deemed negligibly reactive and, therefore, suitable for exemption from the regulatory definition of VOC. Compounds that are more reactive than ethane continue to be considered VOC for regulatory purposes and, therefore, are subject to control requirements. The selection of ethane as the threshold compound was based on a series of smog chamber experiments that underlay the 1977 Recommended Policy.

The EPA has used three different metrics to compare the reactivity of a specific compound to that of ethane: (i) The rate constant for reaction with the hydroxyl radical (OH) (known as k_{OH}); (ii) the maximum incremental reactivity (MIR) on a reactivity per unit mass basis; and (iii) the MIR expressed on a reactivity per mole basis. Differences between these three metrics are discussed below.

The k_{OH} is the rate constant of the reaction of the compound with the OH radical in the air. This reaction is often, but not always, the first and rate-limiting step in a series of chemical reactions by which a compound breaks down in the air and contributes to O_3 formation. If this step is slow, the compound will likely not form O_3 at a very fast rate. The k_{OH} values have long been used by the EPA as metrics of photochemical reactivity and O_3-forming activity, and they were the basis for most of the EPA's early exemptions of negligibly reactive compounds from the regulatory definition of VOC. The k_{OH} metric is inherently a molar-based comparison, *i.e.,* it measures the rate at which molecules react.

The MIR, both by mole and by mass, is a more updated metric of photochemical reactivity derived from a computer-based photochemical model, and it has been used as a metric of reactivity since 1995. This metric considers the complete O_3-forming activity of a compound over multiple hours and through multiple reaction pathways, not merely the first reaction step with OH. Further explanation of the MIR metric can be found in Carter (1994).

The EPA has considered the choice between MIRs with a molar or mass basis for the comparison to ethane in past rulemakings and guidance. In the 2005 Interim Guidance, the EPA stated:

> [A] comparison to ethane on a mass basis strikes the right balance between a threshold that is low enough to capture compounds that significantly affect ozone concentrations and a threshold that is high enough to exempt some compounds that may usefully substitute for more highly reactive compounds.
>
> When reviewing compounds that have been suggested for VOC-exempt status, EPA will continue to compare them to ethane using k_{OH} expressed on a molar basis and MIR values expressed on a mass basis.

The 2005 Interim Guidance notes that the EPA will consider a compound to be negligibly reactive if it is equally as or less reactive than ethane based on either k_{OH} expressed on a molar basis *or* MIR values expressed on a mass basis.

The molar comparison of MIR is more consistent with the original smog chamber experiments, which compared equal molar concentrations of individual VOCs, supporting the selection of ethane as the threshold, while the mass-based comparison of MIR is consistent with how MIR values and other reactivity metrics are applied

in reactivity-based emission limits. It is, however, important to note that the mass-based comparison is slightly less restrictive than the molar-based comparison in that a few more compounds would qualify as negligibly reactive.

Given the two goals of the exemption policy articulated in the 2005 Interim Guidance, the EPA believes that ethane continues to be an appropriate threshold for defining negligible reactivity. And, to encourage the use of environmentally beneficial substitutions, the EPA believes that a comparison to ethane on a mass basis strikes the right balance between a threshold that is low enough to capture compounds that significantly affect O_3 concentrations and a threshold that is high enough to exempt some compounds that may usefully substitute for more highly reactive compounds.

The 2005 Interim Guidance also noted that concerns have sometimes been raised about the potential impact of a VOC exemption on environmental endpoints other than O_3 concentrations, including fine particle formation, air toxics exposures, stratospheric O_3 depletion, and climate change. The EPA has recognized, however, that there are existing regulatory or non-regulatory programs that are specifically designed to address these issues, and the EPA continues to believe in general that the impacts of VOC exemptions on environmental endpoints other than O_3 formation can be adequately addressed by these programs. The VOC exemption policy is intended to facilitate attainment of the O_3 National Ambient Air Quality Standards (NAAQS) and VOC exemption decisions will continue to be based primarily on consideration of a compound's contribution to O_3 formation. However, if the EPA determines that a particular VOC exemption is likely to result in a significant increase in the use of a compound and that the increased use would pose a significant risk to human health or the environment that would not be addressed adequately by existing programs or policies, then the EPA may exercise its judgment accordingly in deciding whether to grant an exemption.

B. Petition To List HFO–1336mzz–Z as an Exempt Compound

DuPont Chemicals & Fluoroproducts (DuPont) submitted a petition to the EPA on February 14, 2014, requesting that *cis*-1,1,1,4,4,4-hexafluorobut-2-ene (HFO–1336mzz–Z; CAS number 692–49–9) be exempted from the regulatory definition of VOC. The petition was based on the argument that HFO–1336mzz–Z has low reactivity relative to ethane. The petitioner indicated that HFO–1336mzz–Z may be used in a variety of applications as a replacement for foam expansion or blowing agents with higher global warming potential (GWP) (≤700 GWP) for use in polyurethane rigid insulating foams, among others. It is also a new developmental refrigerant as a potential working fluid for Organic Rankine Cycles (ORC).[1]

To support its petition, DuPont referenced several documents, including one peer-reviewed journal article on HFO–1336mzz–Z reaction rates (Baasandorj, M. *et al.,* 2011). DuPont also provided a supplemental technical report on the MIR of HFO–1336mzz–Z (Carter, 2011a). Per this report, the MIR of HFO–1336mzz–Z is 0.04 gram (g) O_3/g HFO–1336mzz–Z on the mass-based MIR scale. This reactivity rate is 86 percent lower than that of ethane (0.28 g O_3/g ethane). The reactivity rate k_{OH} for the gas-phase reaction of OH radicals with HFO–1336mzz–Z (k_{OH}) has been measured to be $4.91 \times 10_{-13}$ centimeter (cm)^3/molecule-seconds at ~296 degrees Kelvin (K) (Pitts *et al.,* 1983, Baasandorj *et al.,* 2011). This k_{OH} rate is twice as high as that of ethane (k_{OH} of ethane = $2.4 \times 10_{-13}$ cm^3/molecule-sec at ~298 K) and, therefore, suggests that HFO–1336mzz–Z is twice as reactive as ethane. In most cases, chemicals with high k_{OH} values also have high MIR values, but for HFO–1336mzz–Z, the products that are formed in subsequent reactions are expected to be poly fluorinated compounds, which do not contribute to O_3 formation (Baasandorj *et al.,* 2011). Based on the current scientific understanding of tetrafluoroalkene reactions in the atmosphere, it is unlikely that the actual O_3 impact on a mass basis would equal or exceed that of ethane in the scenarios used to calculate VOC reactivity (Baasandorj *et al.,* 2011; Carter, 2011a).

To address the potential for stratospheric O_3 impacts, the petitioner contended that, because the atmospheric lifetime of HFO–1336mzz–Z due to loss by OH reaction was estimated to be ~20 days and it does not contain chlorine or bromine, it is not expected to contribute to the depletion of the stratospheric O_3 layer.

III. The EPA's Assessment of the Petition

On May 1, 2018, the EPA published a proposed rulemaking (83 FR 19026) seeking comments in response to the petition to revise the EPA's regulatory definition of VOC for exemption of HFO–1336mzz–Z. The EPA is taking final action to respond to the petition by exempting HFO–1336mzz–Z from the regulatory definition of VOC. This action is based on consideration of the compound's low contribution to tropospheric O_3 and the low likelihood of risk to human health or the environment, including stratospheric O_3 depletion, toxicity, and climate change. Additional information on these topics is provided in the following sections.

A. Contribution to Tropospheric Ozone Formation

As noted in studies cited by the petitioner, HFO–1336mzz–Z has a MIR value of 0.04 g O_3/g VOC for ''averaged conditions,'' versus 0.28 g O_3/g VOC for ethane (Carter, 2011). Therefore, the EPA considers HFO–1336mzz–Z to be negligibly reactive and eligible for VOC-exempt status in accordance with the Agency's long-standing policy that compounds should so qualify where either reactivity metric (k_{OH} expressed on a molar basis or MIR expressed on a mass basis) indicates that the compound is less reactive than ethane. While the overall atmospheric reactivity of HFO–1336mzz–Z was not studied in an experimental smog chamber, the chemical mechanism derived from other chamber studies (Carter, 2011) was used to model the complete formation of O_3 for an entire single day under realistic atmospheric conditions (Carter, 2011a). Therefore, the EPA believes that the MIR value calculated in the Carter study submitted by the petitioner is reliable.

Table 2 presents three reactivity metrics for HFO–1336mzz–Z as they compare to ethane.

[1] Konstantinos Kontomaris, 2014, HFO–1336mzz–Z High Temperature Chemical Stability and Use as a Working Fluid in Organic Rankine Cycles. International Refrigeration and Air Conditioning Conference. Purdue University: *https://www.chemours.com/Refrigerants/en_US/products/Opteon/Stationary_Refrigeration/assets/downloads/2014_Purdue-Paper-Opteon-MZ.pdf.*

TABLE 2—REACTIVITIES OF ETHANE AND HFO–1336MZZ–Z

Compound	k_{OH} (cm^3/molecule-sec)	Maximum incremental reactivity (MIR) (g O_3/mole VOC)	Maximum incremental reactivity (MIR) (g O_3/g VOC)
Ethane	2.4×10^{-13}	8.4	0.28
HFO–1336mzz–Z	4.91×10^{-13}	6.6	0.04

Notes:
[1.] k_{OH} value at 298 K for ethane is from Atkinson *et al.,* 2006 (page 3626).
[2.] k_{OH} value at 296 K for HFO–1336mzz–Z is from Baasandorj, 2011.
[3.] Mass-based MIR value (g O_3/g VOC) of ethane is from Carter, 2011.
[4.] Mass-based MIR value (g O_3/g VOC) of HFO–1336mzz–Z is from a supplemental report by Carter, 2011a.
[5.] Molar-based MIR (g O_3/mole VOC) values were calculated from the mass-based MIR (g O_3/g VOC) values using the number of moles per gram of the relevant organic compound.

The reaction rate of HFO–1336mzz–Z with the OH radical (k_{OH}) has been measured to be 4.91×10^{-13} cm^3/molecule-sec (Baasandorj *et al.,* 2011); other reactions with O_3 and the nitrate radical were negligibly small. The corresponding reaction rate of ethane with OH is $2.4 \times 10^{-13}$$cm^3$/molecule-sec (Atkinson *et al.,* 2006). The data in Table 2 show that HFO–1336mzz–Z has a higher k_{OH} value than ethane, meaning that it initially reacts twice as fast in the atmosphere as ethane. However, the resulting unsaturated fluorinated compounds in the atmosphere are short lived and react more slowly to form O_3 (Baasandorj *et al.,* 2011). The mass based MIR is 0.04 g O_3/g VOC and much lower than that of ethane.

A molecule of HFO–1336mzz–Z is less reactive than a molecule of ethane in terms of complete O_3-forming activity as shown by the molar-based MIR (g O_3/mole VOC) values. One gram of HFO–1336mzz–Z has a lower capacity than one gram of ethane to form O_3 in terms of a mass-based MIR. Thus, following the 2005 Interim Guidance in striking a balance between reactivity on a molar basis as well as a gram basis, the EPA finds HFO–1336mzz–Z to be eligible for exemption from the regulatory definition of VOC based on both the molar- and mass-based MIR.

B. Potential Impacts on Other Environmental Endpoints

The EPA's decision to exempt HFO–1336mzz–Z from the regulatory definition of VOC is based on our findings above. However, as noted in the 2005 Interim Guidance, the EPA reserves the right to exercise its judgment in certain cases where an exemption is likely to result in a significant increase in the use of a compound and a subsequent significantly increased risk to human health or the environment. In this case, the EPA does not find that exemption of HFO–1336mzz–Z would result in an increase of risk to human health or the environment, with regard to stratospheric O_3 depletion, toxicity and climate change. Additional information on these topics is provided in the following sections.

1. Contribution to Stratospheric Ozone Depletion

HFO–1336mzz–Z is unlikely to contribute to the depletion of the stratospheric O_3 layer. The O_3 depletion potential (ODP) of HFO–1336mzz–Z is expected to be negligible based on several lines of evidence: The absence of chlorine or bromine in the compound and the atmospheric reactions described in Carter (2008). Because HFO–1336mzz–Z has a k_{OH} value that is twice as high as that of ethane (see section III.A ''Contribution to Tropospheric Ozone Formation''), it will decay before it has a chance to reach the stratosphere and, thus, will not participate in O_3 destruction.

2. The Significant New Alternatives Policy (SNAP) Program Acceptability Findings

The SNAP program is the EPA's program to evaluate and regulate substitutes for end-uses historically using O_3-depleting chemicals. Under section 612(c) of the CAA, the EPA is required to identify and publish lists of acceptable and unacceptable substitutes for class I or class II O_3-depleting substances. Per the SNAP program findings, the ODP of HFO–1336mzz–Z is zero. The SNAP program has listed HFO–1336mzz–Z as an acceptable substitute for a number of foam blowing end-uses provided in 79 FR 62863, October 21, 2014 (USEPA, 2014), and as an acceptable substitute in the refrigeration and air conditioning sector in heat transfer, as well as in chillers and industrial process air conditioning provided in 81 FR 32241, May 23, 2016 (USEPA, 2016).

3. Toxicity

Based on screening assessments of the health and environmental risks of HFO–1336mzz–Z, the SNAP program anticipated that users will be able to use the compound without significantly greater health risks than presented by use of other available substitutes for the same uses (USEPA, 2014, 2016).

The EPA anticipates that HFO–1336mzz–Z will be used consistent with the recommendations specified in the material safety data sheet (SDS) (DuPont, 2011). According to the SDS, potential health effects from inhalation of HFO–1336mzz–Z include skin or eye irritation or frostbite. Exposure to high concentrations of HFO–1336mzz–Z from misuse or intentional inhalation abuse may cause irregular heartbeat. In addition, HFO–1336mzz–Z could cause asphyxiation if air is displaced by vapors in a confined space. The Workplace Environmental Exposure Limit (WEEL) committee of the Occupational Alliance for Risk Science (OARS) reviewed available animal toxicity data and recommends a WEEL for the workplace of 500 parts per million (ppm) (3350 mg/m^3) time-weighted average (TWA) for an 8-hour workday as provided in the OARS (OARS, 2014).[2] This WEEL was derived based on reduced male body weight in the 13-week rat inhalation toxicity study (Dupont, 2011). The WEEL is also protective against skeletal fluorosis, which may occur at higher exposures because of metabolism. The EPA anticipates that users will be able to meet the WEEL and address potential health risks by following requirements and recommendations in the SDS and other safety precautions common to the refrigeration and air conditioning industry.

[2] Occupational Alliance for Risk Science (OARS–WEELs)—HFO–1336mzz–Z, 2014: *https://www.tera.org/OARS/HFO-1336mzz-Z%20WEEL%20FINAL.pdf.*

HFO–1336mzz–Z is not regulated as a hazardous air pollutant (HAP) under title I of the CAA. Also, it is not listed as a toxic chemical under section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA).

The Toxic Substances Control Act (TSCA) gives the EPA authority to assess and prevent potential unreasonable risks to human health and the environment before a new chemical substance is introduced into commerce. Section 5 of TSCA requires manufacturers and importers to notify the EPA before manufacturing or importing a new chemical substance by submitting a Premanufacture Notice (PMN) prior to the manufacture (including import) of the chemical. Under the TSCA New Chemicals Program, the EPA then assesses whether an unreasonable risk may, or will, be presented by the expected manufacturing, processing, distribution in commerce, use, and disposal of the new substance. The EPA has determined, however, that domestic manufacturing, use in non-industrial products, or use other than as described in the PMN may cause serious chronic health effects. To mitigate risks identified during the PMN review of HFO–1336mzz–Z, the EPA issued a Significant New Use Rule (SNUR) under TSCA on June 5, 2015, to require persons to submit a Significant New Use Notice (SNUN) to the EPA at least 90 days before they manufacture or process HFO–1336mzz–Z for uses other than those described in the PMN (80 FR 32003, 32005, June 5, 2015). The required notification will provide the EPA with the opportunity to evaluate the intended use and, if necessary, to prohibit or limit that activity before it occurs. The EPA, therefore, believes that existing programs address the risk of toxicity associated with the use of HFO–1336mzz–Z.

4. Contribution to Climate Change

The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (IPCC AR5) estimated the lifetime of HFO–1336mzz–Z to be approximately 22 days (Baasandorj *et al.,* 2011), and the gas-phase degradation of HFO–1336–mzz–Z is not expected to lead to a significant formation of atmospherically long-lived species. The radiative efficiency of HFO–1336–mzz–Z was calculated to be 0.38 watts per square meter at the earth's surface per part per billion concentration of the material ($W\ m^{-2}\ ppb^{-1}$) based on Baasandorj *et al.,* 2011. The report estimated the resulting 100-year GWP to be 9, meaning that, over a 100-year period, one ton of HFO–1336mzz–Z traps 9 times as much warming energy as one ton of carbon dioxide (CO_2) (IPCC, 2013). HFO–1336mzz–Z's GWP of 9 is lower than those of some of the substitutes in a variety of foam blowing end-uses and in centrifugal and positive displacement chillers, heat transfer, and industrial process air conditioning. HFO–1336mzz–Z was developed to replace other chemicals used for similar end-uses with GWP ranging from 725 to 5,750 such as CFC–11, CFC–113, HCFC–141b and HCFC–22. The petitioner claims that HFO–1336mzz–Z is a better alternative to other substitutes in foam expansion or blowing agents for use in polyurethane rigid insulating foams. Thermal test data and energy efficiency trials indicate that HFO–1336mzz–Z will provide superior insulating value and, thus, reduces climate change impacts both directly by its relatively low GWP and indirectly by decreasing energy consumption throughout the lifecycle of insulated foams in appliances, buildings, refrigerated storage and transportation.

C. Response to Comments and Conclusion

The EPA received five comments on the May 1, 2018, notice of proposed rulemaking. One commenter supported the proposed action to exempt HFO–1336mzz–Z from the EPA's definition of VOC in 40 CFR 51.100(s), one opposed the proposed action, and three raised issues that were outside the scope of this rulemaking including a discussion about air and water quality in Asia and Mexico, and climate change. These three anonymous comments failed to identify any specific issue that is germane to our proposal to exempt HFO–1336mzz–Z. Substantial comments and the EPA's responses are provided below.

Comment: One commenter (ID: EPA–HQ–OAR–2017–0175–0010) expressed concern that ''the EPA should not exempt HFO–1336mzz–Z . . . [and that] . . . surely there is a reason it was . . . [regulated as a VOC] in the first place.'' The commenter expressed skepticism that ''other regulatory groups outside of the EPA'' would prevent the compound from being used, if there were other environmental impacts than O_3, once the EPA exempted this compound. This commenter also expressed concern that the petitioner's data ''could potentially be biased'' and they ''. . . would like to read a proposal that gets its information from a more unbiased source and considers how it will deal with possible drawbacks of deregulating HFO–1336mzz–Z.''

Response: The commenter appears to state that HFO–1336mzz–Z should not be exempted from the definition of VOC simply because it is currently included in the definition of VOC. This is a circular argument, and, if followed, the EPA would never be able to exempt any substances from the definition of VOC, even where, as here, scientific data supported such an exemption. The commenter does not provide any scientific evidence that rebuts the petitioner's data supporting the demonstration that HFO–1336mzz–Z is eligible for this exemption.

The reason HFO–1336mzz–Z is currently regulated as a VOC is because it meets the EPA's definition of VOC in 40 CFR 51.100(s) as ''any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid . . . *which participates in atmospheric photochemical reactions.*'' [emphasis added] The petitioner submitted data to the EPA that show HFO–1336mzz–Z negligibly participates in atmospheric photochemical reactions, presenting a better environmental alternative for similar industrial applications, and therefore should be excluded from the definition of VOC. As explained above, our approval would allow states to encourage VOC substitutions with negligibly reactive compounds that would reduce O_3 formation.

The EPA would like to clarify the statement in the proposal which referred to ''existing regulatory or non-regulatory programs that are specifically designed to address'' other environmental issues besides tropospheric O_3 formation, such as fine particle formation, air toxics exposures, stratospheric O_3 depletion, and climate change. When referring to existing regulatory or non-regulatory programs, the EPA was not referring to ''other regulatory groups outside of the EPA,'' as the commenter suggested. Rather, Congress has granted the EPA with other authorities under the CAA that allow the Agency to address these issues specifically (*e.g.,* NAAQS program for fine particle pollution; section 112 for air toxics). As stated in the 2005 Interim Guidance, where an exemption is likely to result in a significant increase in the use of a compound and a subsequent significantly increased risk to human health or the environment, the EPA reserves the right to exercise its judgment and choose not to grant a petition for an exemption from the definition of VOC, even where the substance meets the reactivity metrics. However, as explained in section III.B. of this final rule, the EPA does not believe an exemption of HFO–1336mzz–

Z will lead to significant environmental impacts.

To the extent the commenter is raising concerns that the EPA's action will result in non-EPA organizations treating HFO–1336mzz–Z differently, we note that this action does not prohibit state and local air pollution regulatory agencies from regulating HFO–1336mzz–Z. Some local agencies continue restrictions on the use of certain compounds that have been excluded from the definition of VOC by the EPA.

With respect to the comment that the petitioner's data could potentially be biased, the EPA uses credible, peer-reviewed information in its review of VOC exemption petitions. In this regard, and as discussed in our proposed rule and in this action, we note that the journal article submitted by DuPont on HFO–1336mzz–Z reaction rates was performed by the National Oceanic and Atmospheric Administration and published in *The Journal of Physical Chemistry,* a peer-reviewed journal. The other primary document relied on to support the exemption petition was authored by the researcher who developed the MIR scale (Carter, 2011a). Staff in the EPA's Office of Research and Development reviewed these documents as part of the petition assessment process and find that they are consistent with current understanding of atmospheric chemistry. We are not aware of information that would indicate they are biased.

Therefore, for reasons discussed above, the EPA is finalizing this rule with no changes. The EPA finds that HFO–1336mzz–Z is negligibly reactive with respect to its contribution to tropospheric O_3 formation and, thus, may be exempted from the EPA's definition of VOC in 40 CFR 51.100(s). HFO–1336mzz–Z has been listed as acceptable for use in several industrial and commercial refrigeration and air conditioning end-uses, as well as for use as a blowing agent under the SNAP program (USEPA, 2014, 2016). The EPA has also determined that exemption of HFO–1336mzz–Z from the regulatory definition of VOC will not result in an increase of risk to human health and the environment, and, to the extent that use of this compound does have impacts on other environmental endpoints, those impacts are adequately managed by existing programs. For example, HFO–1336mzz–Z has a similar or lower stratospheric O_3 depletion potential than available substitutes in those end-uses, and the toxicity risk from using HFO–1336mzz–Z is not significantly greater than the risk from using other available alternatives for the same uses. The EPA has concluded that non-tropospheric O_3-related risks associated with potential increased use of HFO–1336mzz–Z are adequately managed by SNAP. The EPA does not expect significant use of HFO–1336mzz–Z in applications not covered by the SNAP program. To the extent that the compound is used in other applications not already reviewed under SNAP or under the New Chemicals Program under TSCA, the SNUR in place under TSCA requires that any significant new use of a chemical be reported to the EPA using a SNUN. Any significant new use of HFO–1336mzz–Z would, thus, need to be evaluated by the EPA, and the EPA will continually review the availability of acceptable substitute chemicals under the SNAP program.

IV. Final Action

The EPA is responding to the petition by revising its regulatory definition of VOC at 40 CFR 51.100(s) to add HFO–1336mzz–Z to the list of compounds that are exempt from the regulatory definition of VOC because it is less reactive than ethane based on a comparison of mass-based MIR and molar-based MIR metrics and is, therefore, considered negligibly reactive. As a result of this action, if an entity which uses or produces this compound and is subject to the EPA regulations limiting the use of VOC in a product, limiting the VOC emissions from a facility, or otherwise controlling the use of VOC for purposes related to attaining the O_3 NAAQS, this compound will not be counted as a VOC in determining whether these regulatory obligations have been met. This action would affect whether this compound is considered a VOC for state regulatory purposes to reduce O_3 formation, if a state relies on the EPA's regulatory definition of VOC. States are not obligated to exclude from control as a VOC those compounds that the EPA has found to be negligibly reactive. However, no state may take credit for controlling this compound in its O_3 control strategy. Consequently, reductions in emissions for this compound will not be considered or counted in determining whether states have met the rate of progress requirements for VOC in State Implementation Plans or in demonstrating attainment of the O_3 NAAQS.

V. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *https://www2.epa.gov/laws-regulations/laws-and-executive-orders.*

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was, therefore, not submitted to the Office of Management and Budget (OMB) for review.

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is considered an Executive Order 13771 deregulatory action. This final rule provides meaningful burden reduction by exempting HFO–1336mzz–Z from the VOC regulatory definition and relieving manufacturers, distributers, and users from recordkeeping or reporting requirements. This action is voluntary in nature and has non-quantifiable cost savings given the unpredictability in who or how much of it will be used.

C. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the PRA. It does not contain any recordkeeping or reporting requirements.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. This action removes HFO–1336mzz–Z from the regulatory definition of VOC and, thereby, relieves manufacturers, distributers, and users of the compound from tropospheric O_3 requirements to control emissions of the compound.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. This action imposes no enforceable duty on any state, local or tribal governments, or the private sector.

F. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications, as specified in Executive Order 13175. This final rule removes HFO–1336mzz–Z from the regulatory definition of VOC and, thereby, relieves manufacturers, distributers and users from tropospheric O_3 requirements to control emissions of the compound. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

This action is not subject to Executive Order 13045, because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. Since HFO–1336mzz–Z is utilized in specific industrial applications where children are not present and dissipates quickly (*e.g.,* lifetime of 22 days) with short-lived end products, there is no exposure or disproportionate risk to children. This action removes HFO–1336mzz–Z from the regulatory definition of VOC and, thereby, relieves manufacturers, distributers and users from tropospheric O_3 requirements to control emissions of the compound.

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

K. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629 February 16, 1994). This action removes HFO–1336mzz–Z from the regulatory definition of VOC and, thereby, relieves manufacturers, distributers, and users of the compound from tropospheric O_3 requirements to control emissions of the compound.

L. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

M. Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the District of Columbia Circuit Court within 60 days from the date the final action is published in the **Federal Register**. Filing a petition for review by the Administrator of this final action does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review must be filed, and shall not postpone the effectiveness of such action. Thus, any petitions for review of this action related to the exemption of HFO–1336mzz–Z from the regulatory definition of VOC must be filed in the Court of Appeals for the District of Columbia Circuit within 60 days from the date the final action is published in the **Federal Register**.

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List of Subjects in 40 CFR Part 51

Environmental protection, Administrative practice and procedure, Air pollution control, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Dated: November 16, 2018.

Andrew R. Wheeler,

Acting Administrator.

For reasons stated in the preamble, part 51 of chapter I of title 40 of the Code of Federal Regulations is amended as follows:

PART 51—REQUIREMENTS FOR PREPARATION, ADOPTION, AND SUBMITTAL OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 51 continues to read as follows:

Authority: 23 U.S.C. 101; 42 U.S.C. 7401–7671q.

Subpart F—Procedural Requirements

■ 2. Section 51.100 is amended by revising paragraph (s)(1) introductory text to read as follows:

§ 51.100 Definitions.

* * * * *

(s) * * *

(1) This includes any such organic compound other than the following, which have been determined to have negligible photochemical reactivity: Methane; ethane; methylene chloride (dichloromethane); 1,1,1-trichloroethane (methyl chloroform); 1,1,2-trichloro-1,2,2-trifluoroethane (CFC–113); trichlorofluoromethane (CFC–11); dichlorodifluoromethane (CFC–12); chlorodifluoromethane (HCFC–22); trifluoromethane (HFC–23); 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC–114); chloropentafluoroethane (CFC–115); 1,1,1-trifluoro 2,2-dichloroethane (HCFC–123); 1,1,1,2-tetrafluoroethane (HFC–134a); 1,1-dichloro 1-fluoroethane (HCFC–141b); 1-chloro 1,1-difluoroethane (HCFC–142b); 2-chloro-1,1,1,2-tetrafluoroethane (HCFC–124); pentafluoroethane (HFC–125); 1,1,2,2-tetrafluoroethane (HFC–134); 1,1,1-trifluoroethane (HFC–143a); 1,1-difluoroethane (HFC–152a); parachlorobenzotrifluoride (PCBTF); cyclic, branched, or linear completely methylated siloxanes; acetone; perchloroethylene (tetrachloroethylene); 3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC–225ca); 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC–225cb); 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43–10mee); difluoromethane (HFC–32); ethylfluoride (HFC–161); 1,1,1,3,3,3-hexafluoropropane (HFC–236fa); 1,1,2,2,3-pentafluoropropane (HFC–245ca); 1,1,2,3,3-pentafluoropropane (HFC–245ea); 1,1,1,2,3-pentafluoropropane (HFC–245eb); 1,1,1,3,3-pentafluoropropane (HFC–245fa); 1,1,1,2,3,3-hexafluoropropane (HFC–236ea); 1,1,1,3,3-pentafluorobutane (HFC–365mfc); chlorofluoromethane (HCFC–31); 1 chloro-1-fluoroethane (HCFC–151a); 1,2-dichloro-1,1,2-trifluoroethane (HCFC–123a); 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-butane ($C_4F_9OCH_3$ or HFE–7100); 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ($(CF_3)_2CFCF_2OCH_3$); 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane ($C_4F_9OC_2H_5$ or HFE–7200); 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ($(CF_3)_2CFCF_2OC_2H_5$); methyl acetate; 1,1,1,2,2,3,3-heptafluoro-3-methoxy-propane (n-C3F7OCH3, HFE–7000); 3-ethoxy- 1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl) hexane (HFE–7500); 1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea); methyl formate (HCOOCH3); 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane (HFE–7300); propylene carbonate; dimethyl carbonate; *trans*-1,3,3,3-tetrafluoropropene; HCF_2OCF_2H (HFE–134); $HCF_2OCF_2OCF_2H$ (HFE–236cal2); $HCF_2OCF_2CF_2OCF_2H$ (HFE–338pcc13); $HCF_2OCF_2OCF_2CF_2OCF_2H$ (H-Galden 1040x or H-Galden ZT 130 (or 150 or 180)); *trans* 1-chloro-3,3,3-trifluoroprop-1-ene; 2,3,3,3-tetrafluoropropene; 2-amino-2-methyl-1-propanol; t-butyl acetate; 1,1,2,2- Tetrafluoro -1-(2,2,2-trifluoroethoxy) ethane; *cis*-1,1,1,4,4,4-hexafluorobut-2-ene (HFO–1336mzz-Z); and perfluorocarbon compounds which fall into these classes:

* * * * *

[FR Doc. 2018–25891 Filed 11–27–18; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 76

[MB Docket No. 17–105; FCC 18–150]

Procedural Revisions to the Filing of Open Video System Certification Applications

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: In this document, the Federal Communications Commission (FCC or Commission) modernizes the Open Video System (OVS) filing procedures by specifying that OVS applications be required to send certification applications, including FCC Form 1275 and all attachments, as well as notices of intent, via electronic email (email) delivery to a designated Commission email address. The FCC also eliminates certain existing requirements associated with the rule. Parties wishing to respond to a FCC Form 1275 filing must submit comments or oppositions via electronic mail (email).

DATES: *Effective date:* November 28, 2018.

FOR FURTHER INFORMATION CONTACT: For additional information on this proceeding, contact Sonia Greenaway Mickle, *Sonia.Greenaway@fcc.gov,* of the Policy Division, Media Bureau, (202) 418–1419.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Order, FCC 18–150, adopted and released on October 25, 2018. The full text of this document is available for public inspection and copying during regular business hours in the FCC Reference Center, Federal Communications Commission, 445 12th Street SW, Room CY–A257, Washington, DC 20554. This document will also be available via ECFS at *http://fjallfoss.fcc.gov/ecfs/*. Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat. Copies of the materials can be obtained from the FCC's Reference Information Center at (202) 418–0270. Alternative formats are available for people with disabilities (Braille, large print, electronic files, audio format), by sending an email to *fcc504@fcc.gov* or calling the Commission's Consumer and Governmental Affairs Bureau at (202) 418–0530 (voice), (202) 418–0432 (TTY).

Synopsis

1. The Commission in this Order establishes electronic filing procedures for parties seeking to operate an Open Video System (OVS) to submit a certification application and notice of intent. By replacing our current paper filing requirements for OVS applications and notices with an electronic filing system, this Order modernizes our regulations, reduces burdens for OVS applicants, and increases the efficiency of the Commission's processing of applications.

2. The Telecommunications Act of 1996 added section 653 to the Communications Act of 1934, as amended (the Act), establishing OVS as a new framework for entry into the multichannel video programming distribution marketplace.[1] Any party

[1] Telecommunications Act of 1996, Public Law 104–104, 110 Stat. 56, approved February 8, 1996. An open video system is similar to a cable system in that it is a facilities-based system for the delivery of video programming. Unlike cable systems, however, open video systems must set aside up to two thirds of their channel capacity for the delivery of independent programming of third parties. The OVS framework was established to provide competition and lower barriers to entry in the provision of video programming to consumers. *See Implementation of Section 302 of the Telecommunications Act of 1996, Open Video Systems,* 11 FCC Rcd 18223, 18227, para. 2–3 (1996) *(Second Report and Order).* The approach developed for the OVS model provides streamlined