



**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

**[EPA-R05-OAR-2020-0542; FRL-10017-35 Region 5]**

**Air Plan Approval; Illinois; Volatile Organic Material**

**Definition Update**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to approve a revision to the Illinois State Implementation Plan (SIP). The revision will amend the Illinois Administrative Code (IAC) by updating the definition of volatile organic material (VOM) and volatile organic compounds (VOC) to exclude (Z)-1,1,1,4,4,4-hexafluorobut-2-ene. This revision is consistent with an EPA rulemaking in 2018, which exempted this compound from the Federal definition of VOC on the basis that the compound makes a negligible contribution to tropospheric ozone formation.

**DATES:** Comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R05-OAR-2020-0542 at <http://www.regulations.gov>, or via email to [aburano.douglas@epa.gov](mailto:aburano.douglas@epa.gov). For comments submitted at Regulations.gov, follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. For either manner of submission, 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. EPA will generally 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, please contact the person identified in the **"FOR FURTHER INFORMATION CONTACT"** section. For the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** Andrew Lee, Physical Scientist, Attainment Planning and Maintenance Section, Air Programs Branch (AR-18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 353-7645, [lee.andrew.c@epa.gov](mailto:lee.andrew.c@epa.gov). The EPA Region 5 office is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays and facility closures due to COVID-19.

**SUPPLEMENTARY INFORMATION:** Throughout this document whenever "we," "us," or "our" is used, we mean EPA.

## **I. Background Information**

Tropospheric ozone, commonly known as smog, is formed when VOC and nitrogen oxides (NO<sub>x</sub>) react in the atmosphere in the presence of sunlight. Because of the harmful effects of ozone, EPA and state governments implement rules to limit the amount of certain VOC and NO<sub>x</sub> that can be released into the atmosphere. VOC are those compounds of carbon (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate) that form ozone through atmospheric photochemical reactions. VOC have different levels of reactivity; they do not react at the same speed or form ozone to the same extent.

The Clean Air Act (CAA) requires the regulation of VOC for various purposes. Section 302(s) of the CAA specifies that EPA has the authority to define the meaning of VOC, and hence, what compounds shall be treated as VOC for regulatory purposes. EPA's longstanding policy is that compounds of carbon with negligible reactivity need not be regulated to reduce ozone and should be exempted from the regulatory definition of VOC. See 42 FR 35314 (July 8, 1977), 70 FR 54046 (Sept. 13, 2005).

EPA uses the reactivity of ethane as the threshold for determining whether a compound makes a negligible contribution to tropospheric ozone formation. 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 by EPA from the regulatory definition of VOC. EPA lists compounds it has determined to be

negligibly reactive, and thus excluded from the regulatory definition of VOC, in 40 CFR 51.100(s).

On November 28, 2018, EPA added cis-1,1,1,4,4,4-hexafluorobut-2-ene (also known as HFO-1336mzz-Z; Chemical Abstract Service (CAS) RN 692-49-9), a hydrofluoroolefin, to the list of compounds excluded from the regulatory definition of VOC because it makes a negligible contribution to ground-level ozone formation. See 83 FR 61127.

## **II. The Illinois Submittal**

On October 20, 2020, the Illinois Environmental Protection Agency (IEPA) submitted amendments to 35 IAC 211.7150 "Volatile Organic Material (VOM) or Volatile Organic Compound (VOC)" for approval as revisions to the Illinois SIP. Illinois' SIP currently includes a definition of VOM at 35 IAC 211.7150. See 81 FR 95475 (Dec. 28, 2016). Subsection (a) of 35 IAC 211.7150 includes a list of compounds excluded from the regulatory definition of VOC, which reflect some of the compounds EPA has excluded in 40 CFR 51.100(s), on the basis that they make a negligible contribution to tropospheric ozone formation.

The proposed SIP revision updates the compounds excluded from the definition of VOM to conform to EPA's recent exemption of a chemical compound from regulations of ozone precursors. Specifically, the SIP revision excludes (Z)-1,1,1,4,4,4-hexafluorobut-2-ene from the definition of VOM or VOC at 35 IAC 211.7150. Illinois uses the International Union of Pure and Applied Chemistry (IUPAC) preferred name of (Z)-1,1,1,4,4,4-

hexafluorobut-2-ene instead of cis-1,1,1,4,4,4-hexafluorobut-2-ene when addressing the compound. These changes do not interfere with the Federal listing of excluded compounds, and provide more specific chemical composition, structural, and isomeric identification information. Illinois also lists the compound by its other identifiers: HFO-1336mzz-Z and CAS No. 692-49-9.

The Illinois Pollution Control Board (IPCB) held a public hearing on the proposed SIP revision on July 16, 2020. IPCB received three comments at the public hearing that resulted in no substantial changes to the amendment. IPCB also adopted minor administrative changes such as alphabetizing compound names and adopting IUPAC names for some compounds listed at 35 IAC 211.7150.

### **III. EPA's Analysis of the Proposed SIP Revision**

In 2014, EPA received a petition requesting that cis-1,1,1,4,4,4-hexafluorobut-2-ene be exempted from VOC control based on its low reactivity, using ethane as a benchmark. Based on the mass maximum incremental reactivity value for the compound being less than that of ethane, EPA concluded that this compound makes negligible contributions to tropospheric ozone formation. Additionally, EPA considered risks not related to tropospheric ozone associated with currently allowed uses of the chemical to be acceptable. As a result, on November 28, 2018, EPA responded to the petition by amending 40 CFR 51.100(s) to exclude this chemical compound from the definition of VOC for

purposes of preparing SIPs to attain the national ambient air quality standard for ozone under title I of the CAA. See 83 FR 61127 (Nov. 28, 2018). EPA's action became effective on January 28, 2019.

By excluding cis-1,1,1,4,4,4-hexafluorobut-2-ene from the definition of VOM at 35 IAC 211.7150, Illinois' proposed SIP revision is consistent with EPA's action amending the definition of VOC at 40 CFR 51.100(s).

#### **IV. What Action is EPA Taking?**

EPA is proposing to approve the revision to the Illinois SIP at 35 IAC 211.7150 submitted on October 20, 2020. The proposed approval of the revision meets the criteria of the CAA and applicable Federal regulations.

#### **V. Incorporation by Reference**

In this rule, EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is proposing to incorporate by reference revisions to 35 IAC 211.7150 "Volatile Organic Material (VOM) or Volatile Organic Compound (VOC)", effective August 18, 2020. EPA has made, and will continue to make, these documents generally available through [www.regulations.gov](http://www.regulations.gov) and at the EPA Region 5 Office (please contact the person identified in the "**FOR FURTHER INFORMATION CONTACT**" section of this preamble for more information).

#### **VI. Statutory and Executive Order Reviews**

Under the CAA the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);

- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- 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
- 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).

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,  
Incorporation by reference, Intergovernmental relations, Ozone,  
Reporting and recordkeeping requirements, Volatile organic  
compounds.

Dated: February 4, 2021.

Cheryl Newton,  
Acting Regional Administrator, Region 5.

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