

**IDENTICAL-IN-SUBSTANCE RULEMAKING ADDENDUM (PROPOSED)**  
**TO THE JANUARY 19, 2017 OPINION AND ORDER OF THE BOARD**

**Definition of VOM Update, USEPA Amendments (January 1, 2016 through June 30, 2016), R17-2 (January 19, 2017)**

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The tables included in this addendum supplement the Board's January 19, 2017 opinion and order in the above-cited identical-in-substance rulemaking.

**Table 1:**  
**Deviations from the Text of the Federal Amendments**

35 Ill. Adm. Code 211.7150(a), "Tertiary-butyl acetate"; derived from 40 C.F.R. 51.100(s)(1), t-butyl acetate

Retained the name "tertiary-butyl acetate," rather than use "t-butyl acetate"; added the IUPAC name "1,1-dimethylethyl acetic acid ester" in parentheses.

**Table 2:**  
**Board Housekeeping Amendments**

35 Ill. Adm. Code 211.7150(a), "acetone" (Board): Changed the common name "acetone" to the Added the IUPAC name "propan-2-one," moving the entry into appropriate alphabetic order.

35 Ill. Adm. Code 211.7150(a), "2-amino-2-methylpropan-1-ol" (Board): Changed "2-amino-2-methyl-1-propanol" to the IUPAC name "2-amino-2-methylpropan-1-ol"; added "CAS No. " in parentheses.

35 Ill. Adm. Code 211.7150(a), "bis(difluoromethoxy)difluoromethane" (Board): Changed "bis(difluoromethoxy)(difluoro)methane" to the IUPAC name "bis(difluoromethoxy)-

difluoromethane”; removed the structural formula “CHF<sub>2</sub>OCF<sub>2</sub>OCHF<sub>2</sub> or ”; added “CAS No. CAS No. 78522-47-1” offset by a comma in the parentheses.

- 35 Ill. Adm. Code 211.7150(a), “1,2-bis(difluoromethoxy)-1,1,2,2-tetrafluoroethane” (Board): Removed the structural formula “CHF<sub>2</sub>OCF<sub>2</sub>CF<sub>2</sub>OCHF<sub>2</sub> or ”; added “CAS No. 188690-78-0” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “tertiary-butyl acetate” (Board): Added the alternative IUPAC name “1,1-dimethylethyl acetic acid ester” and “CAS No. 540-88-5” separated by a comma in parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1-chloro-1,1-difluoroethane” (Board): Added “CAS No. 75-68-3” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “chlorodifluoromethane” (Board): Added “CAS No. 75-45-6” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1-chloro-1-fluoroethane” (Board): Added “CAS No. 1615-75-4” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “chlorofluoromethane” (Board): Added “CAS No. 593-70-4” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “chloropentafluoroethane” (Board): Added “CAS No. 76-15-3” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “2-chloro-1,1,1,2-tetrafluoroethane” (Board): Added “CAS No. 2837-89-0” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “(1E)-1-chloro-3,3,3-trifluoroprop-1-ene” (Board): Added the IUPAC name “(1E)-1-chloro-3,3,3-trifluoroprop-1-ene,” placing the common name “trans-1-chloro-3,3,3-trifluoroprop-1-ene” in parentheses; added “CAS No. 29118-24-9” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethylpentane” (Board): Corrected “1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane” to “1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethylpentane” by replacing the hard hyphen between the “methyl” and “pentane” moieties with an optional hyphen<sup>1</sup>; removed the alternative name and structural formula “L-14787, or C<sub>2</sub>F<sub>5</sub>CF(OCH<sub>3</sub>)CF(CF<sub>3</sub>)<sub>2</sub>”; added “CAS No. 132182-92-4” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1-chloro-4-(trifluoromethyl)-benzene” (Board): Added the IUPAC name “1-Chloro-4-(trifluoromethyl)-benzene,” placing the common name “parachlorobenzotrifluoride (PCBTF)” in parentheses and moving the entry into appropriate alphabetic order; added “CAS No. 98-56-6” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1,2,3,4,4,5,5,5-decafluoropentane” (Board): Added “CAS No. 138495-42-8” offset by a comma in the parentheses.

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<sup>1</sup> A hard hyphen allows an optional break at the end of a line, but it will also display as a hyphen in the middle of a line. See *infra* note 2.

- 35 Ill. Adm. Code 211.7150(a), “dichlorodifluoromethane” (Board): Added “CAS No. 75-71-8” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1-dichloro-1-fluoroethane” (Board): Added “CAS No. 1717-00-6” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “dichloromethane” (Board): Added the IUPAC name “dichloromethane”; moved the common name “methylene chloride” into parentheses; moved the entry into appropriate alphabetical order; added “CAS No. 75-09-2” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “3,3-dichloro-1,1,1,2,2-pentafluoropropane” (Board): Added “CAS No. 422-56-0” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,3-dichloro-1,1,2,2,3-pentafluoropropane” (Board): Added “CAS No. 507-55-1” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,2-dichloro-1,1,2,2-tetrafluoroethane” (Board): Added “CAS No. 76-14-2” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1-dichloro-2,2,2-trifluoroethane” (Board): Changed “1,1,1-trifluoro-2,2-dichloroethane” to the IUPAC name “1,1-dichloro-2,2,2-trifluoroethane”; moved the entry into appropriate alphabetical order; added “CAS No. 306-83-2” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,2-dichloro-1,1,2-trifluoroethane” (Board): Added “CAS No. 354-23-4” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1-difluoroethane” (Board): Added “CAS No. 75-37-6” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “difluoromethane” (Board): Added “CAS No. 75-10-5” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “(difluoromethoxy)difluoromethane” (Board): Changed “(difluoromethoxy)(difluoro)methane” to the IUPAC name “(difluoromethoxy)difluoromethane”; removed the structural formula “CHF<sub>2</sub>OCHF<sub>2</sub> or”; added “CAS No. 1691-17-4” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1-(difluoromethoxy)-2-[(difluoromethoxy)(difluoro)methoxy]-1,1,2,2-tetrafluoroethane” (Board): Removed the structural formula “CHF<sub>2</sub>OCF<sub>2</sub>OCF<sub>2</sub>CF<sub>2</sub>OCHF<sub>2</sub> or”; corrected “HFE-43-10pccc” to “HFE-43-10pccc124”; added “CAS No. 188690-77-9” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane” (Board): Removed the structural formula “(CF<sub>3</sub>)<sub>2</sub>CF<sub>2</sub>OCH<sub>3</sub>”; added “CAS No. 163702-08-7” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “dimethyl carbonate” (Board): Added “CAS No. 616-38-6” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “ethane” (Board): Added “CAS No. 74-84-0” offset by a comma in the parentheses.

- 35 Ill. Adm. Code 211.7150(a), “2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane” (Board): Removed the structural formula “(CF<sub>3</sub>)<sub>2</sub>CF<sub>2</sub>OC<sub>2</sub>H<sub>5</sub>”; added “CAS No. 163702-06-5” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl)hexane” (Board): Added “CAS No. 297730-93-9” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane” (Board): Removed the structural formula “C<sub>4</sub>F<sub>9</sub>OC<sub>2</sub>H<sub>5</sub> or”; added “CAS No. 163702-05-4” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “ethylfluoride” (Board): Added “CAS No. 353-36-6” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1,2,2,3,3-heptafluoro-3-methoxypropane” (Board): Removed the structural formula “n-C<sub>3</sub>F<sub>7</sub>OCH<sub>3</sub> or”; added “CAS No. 375-03-1” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1,2,3,3,3-heptafluoropropane” (Board): Added “CAS No. 431-89-0” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1,2,3,3-hexafluoropropane” (Board): Added “CAS No. 431-63-0” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1,3,3,3-hexafluoropropane” (Board): Added “CAS No. 690-39-1” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “methane” (Board): Added “CAS No. 74-82-8” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “methyl acetate” (Board): Added the alternative name “methyl ethanoate” and “CAS No. 107-31-3” in parentheses.
- 35 Ill. Adm. Code 211.7150(a), “methylene chloride” (Board): Added the IUPAC name “dichloromethane”; moved the common name “methylene chloride” into parentheses; moved the entry into appropriate alphabetical order.
- 35 Ill. Adm. Code 211.7150(a), “4-methyl-1,3-dioxolan-2-one” (Board): Added the IUPAC name “4-methyl-1,3-dioxolan-2-one”; moved the common name “propylene carbonate” in parentheses; moved the entry into appropriate alphabetical order; added “CAS No. 108-32-7” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “methyl formate” (Board): Removed the structural formula “CHOOCH<sub>3</sub>”; added the alternative name “ethyl ethanoate” and added “CAS No. 107-31-3” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane” (Board): Removed the structural formula “C<sub>4</sub>F<sub>9</sub>OCH<sub>3</sub> or”; added “CAS No. 163702-07-6” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “parachlorobenzotrifluoride” (Board): Added the IUPAC name “1-Chloro-4-(trifluoromethyl)-benzene”; moved the common name “parachlorobenzotrifluoride (PCBTF)” in parentheses; moving the entry into appropriate alphabetic order.

- 35 Ill. Adm. Code 211.7150(a), “1,1,1,3,3-pentafluorobutane” (Board): Added “CAS No. 406-58-6” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “pentafluoroethane” (Board): Added “CAS No. 354-33-6” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,2,2,3-pentafluoropropane” (Board): Added “CAS No. 679-86-7” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,2,3,3-pentafluoropropane” (Board): Added “CAS No. 24270-66-4” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1,2,3-pentafluoropropane” (Board): Added “CAS No. 431-31-2” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1,3,3-pentafluoropropane” (Board): Added “CAS No. 460-73-1” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “perchloroethylene” (Board): Added the IUPAC name “tetrachloroethylene”; moved the common name “perchloroethylene” in parentheses; moved the entry into appropriate alphabetic order.
- 35 Ill. Adm. Code 211.7150(a), “propan-2-one” (Board): Added the IUPAC name “propan-2-one”; moved the common name “acetone” into parentheses; moved the entry into appropriate alphabetic order; added “CAS No. 67-64-1” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “propylene carbonate” (Board): Added the IUPAC name “4-methyl-1,3-dioxolan-2-one”; moved the common name “propylene carbonate” in parentheses; moved the entry into appropriate alphabetical order.
- 35 Ill. Adm. Code 211.7150(a), “tetrachloroethylene” (Board): Added the IUPAC name “tetrachloroethylene”; moved the common name “perchloroethylene” in parentheses; moved the entry into appropriate alphabetic order; added “CAS No. 127-18-4” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,2,2-tetrafluoroethane” (Board): Added “CAS No. 359-35-3” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1,2-tetrafluoroethane” (Board): Added “CAS No. 811-97-2” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “(1E)-1,3,3,3-tetrafluoropropene” (Board): Added the IUPAC name “(1E)-1,3,3,3-tetrafluoropropene”; moved the common name “trans-1,3,3,3-tetrafluoropropene” and “CAS No. 29118-24-9” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “2,3,3,3-tetrafluoroprop-1-ene” (Board): Changed “2,3,3,3-tetrafluoropropene” to the IUPAC name “2,3,3,3-tetrafluoroprop-1-ene”; added “CAS No. 754-12-1” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “1,1,1-trichloroethane” (Board): Added “CAS No. 71-55-6” offset by a comma in the parentheses.
- 35 Ill. Adm. Code 211.7150(a), “trichlorofluoromethane” (Board): Added “CAS No. 75-69-4” offset by a comma in the parentheses.

35 Ill. Adm. Code 211.7150(a), “1,1,2-trichloro-1,2,2-trifluoroethane” (Board): Added “CAS No. 76-13-1” offset by a comma in the parentheses.

35 Ill. Adm. Code 211.7150(a), “1,1-dichloro-2,2,2-trifluoroethane” (Board): Changed “1,1,1-trifluoro-2,2-dichloroethane” to the IUPAC name “1,1-dichloro-2,2,2-trifluoroethane”; moved the entry into appropriate alphabetical order.

35 Ill. Adm. Code 211.7150(a), “1,1,1-trifluoroethane” (Board): Added “CAS No. 420-46-2” offset by a comma in the parentheses.

35 Ill. Adm. Code 211.7150(a), “trifluoromethane” (Board): Added “CAS No. 75-46-7” offset by a comma in the parentheses.

35 Ill. Adm. Code 211.7150(d) (Board): Changed “subsection (b) of this Section” to “subsection (b).”

### **Table 3:**

#### **Revisions to the Text of the Proposed Amendments Made in Final Adoption**

35 Ill. Adm. Code 211.7150(a), “1-chloro-4-(trifluoromethyl)benzene” (Board): Moved the entry into the appropriate alphabetical order position.

35 Ill. Adm. Code 211.7150(a), “(difluoromethoxy)difluoromethane” (JCAR): Changed the format of the amendment “(difluoromethoxy)(difluoro)methane” to “(Difluoromethoxy)difluoromethane (difluoro)methane.”

35 Ill. Adm. Code 211.7150(a), “methane” (JCAR): Changed “CAS no.” to “CAS No.”

35 Ill. Adm. Code 211.7150 source note (JCAR): Corrected “38 Ill. Reg.” to “41 Ill. Reg.”

### **Table 4:**

#### **Requested Revisions to the Text of the Proposed Amendments Not Made in Final Adoption**

35 Ill. Adm. Code 211.7150(a), “1-chloro-4-(trifluoromethyl)benzene”

JCAR: Change the optional hyphen between “(trifluoromethyl)” and “benzene” to a hard hyphen.

Response: A hard hyphen is inappropriate. No hyphen should appear except at a line break. The optional hyphen allows appropriate breaking of the long chemical name between moieties at a line break, but does not otherwise appear except at a line break.

35 Ill. Adm. Code 211.7150(a), “1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane”

JCAR: remove the optional hyphen between “trifluoromethyl” and “pentane.”

Response: An optional hyphen allows appropriate breaking of the long chemical name between moieties at a line break.

35 Ill. Adm. Code 211.7150(a), “1,1-dichloro-2,2,2-trifluoroethane”

JCAR: remove the optional hyphen between “trifluoro” and “methane.”

Response: An optional hyphen allows appropriate breaking of the long chemical name between moieties at a line break.

**Table 5:**  
**Errors in Federal Chemical Names and Board Corrections**

1-chloro-1,1-difluoroethane: USEPA used a space instead of a hyphen between “1-chloro” and “1,1-difluoroethane.”

USEPA used the names “dichlorofluoroethane” and “ethane, 1,1-dichloro-1-fluoro-” when adding the exclusion at 54 Fed. Reg. 1987 (Jan. 18, 1989). USEPA used “dichlorofluoroethane” when codifying the definition of VOC as 40 C.F.R. 51.100(s) at 56 Fed. Reg. 11387 (Mar. 18, 1991). USEPA changed the name to “1-chloro 1,1-difluoroethane” in the course of adopting other exclusions at 59 Fed. Reg. 50696 (Oct. 5, 1994).

The Board adopted the exclusion as “chlorodifluoroethane” in Exemptions from the Definition of VOM, R89-8 (Oct. 18, 1989). The Board changed the name to use the federal name, “1-chloro 1,1-difluoroethane,” in Omnibus Cleanup of the Volatile Organic Material RACT Rules Applicable to Ozone Nonattainment Areas: Amendments to 35 Ill. Adm. Code 203, 211, 218, and 219, R93-9 (Sep. 9, 1993) when the Board moved the definition from 211.122 to 211.7150 and deleted a parallel definition at 203.145. The Board added the hyphen to correct the name to “1-chloro-1,1-difluoroethane” in Exemptions from the Definition of VOM, USEPA Amendments (July 1, 1994 through December 31, 1994), R95-2 (July 7, 1995).

1-chloro-1-fluoroethane: USEPA used a space instead of a hyphen between “1” and “chloro-1-fluoroethane.”

USEPA adopted the exclusion with the correct format for the chemical name at 62 Fed. Reg. 44900 (Aug. 22, 1997). The hyphen did not subsequently appear in the *Code of Federal Regulations*. See 40 C.F.R. 51.100(s)(1) (1998).

The Board added the hyphen to correct the name to “1-chloro-1-fluoroethane” in Exemptions from the Definition of VOM, USEPA Amendments (July 1, 1997 through April 9, 1998), R98-17 (June 17, 1998).

1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethylpentane: USEPA added a hard hyphen<sup>2</sup> between “1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl” and “pentane.”

USEPA added the hard hyphen in initial adoption of this exclusion at 72 Fed. Reg. 2193 (Jan. 18, 2007).

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<sup>2</sup> An optional hyphen allows a line break at its location in the word and only appears when the break occurs. An optional hyphen is otherwise not visible.

The Board adopted the exclusion as “1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethyl-pentane” in Exemptions from the Definition of VOM, USEPA Amendments (January 1, 2007 through June 30, 2007), R08-6 (January 10, 2008). The Board corrects the name to “1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethylpentane” by replacing the hard hyphen with an optional hyphen in this proceeding.

1,1-dichloro-1-fluoroethane: USEPA used a space instead of a hyphen between “1,1-dichloro” and “1-fluoroethane.”

USEPA used the names “chlorodifluoroethane” and “ethane, 1-chloro-1,1-difluoro-” when adding the exclusion at 54 Fed. Reg. 1987 (Jan. 18, 1989). USEPA used “dichlorofluoroethane” when codifying the definition of VOC as 40 C.F.R. 51.100(s) at 56 Fed. Reg. 11387 (Mar. 18, 1991). USEPA changed the name to “1,1-dichloro 1-fluoroethane” in the course of adopting other exclusions at 59 Fed. Reg. 50696 (Oct. 5, 1994).

The Board adopted the exclusion as “dichlorofluoroethane” in Exemptions from the Definition of VOM, R89-8 (Oct.18, 1989). The Board changed the name to use the federal name, “1,1-dichloro 1-fluoroethane,” in Omnibus Cleanup of the Volatile Organic Material RACT Rules Applicable to Ozone Nonattainment Areas: Amendments to 35 Ill. Adm. Code 203, 211, 218, and 219, R93-9 (Sep. 9, 1993) when the Board moved the definition from 211.122 to 211.7150 and deleted a parallel definition at 203.145. The Board added the hyphen to correct the name to “1,1-dichloro-1-fluoroethane” in Exemptions from the Definition of VOM, USEPA Amendments (July 1, 1994 through December 31, 1994), R95-2 (July 7, 1995).

1,2-dichloro-1,1,2,2-tetrafluoroethane: USEPA used a space instead of a hyphen between “1,2-dichloro” and “1,1,2,2-tetrafluoroethane.”

USEPA used the names “dichlorotetrafluoroethane” when adding the exclusion at 45 Fed. Reg. 48941 (July 22, 1980). USEPA used “dichlorotetrafluoroethane” when codifying the definition of VOC as 40 C.F.R. 51.100(s) at 56 Fed. Reg. 11387 (Mar. 18, 1991). USEPA changed the name to “1,2-dichloro 1,1,2,2-tetrafluoroethane” in the course of adopting other exclusions at 59 Fed. Reg. 50696 (Oct. 5, 1994).

The Board adopted the exclusion as “dichlorofluoroethane” in Exemptions from the Definition of VOM, R89-8 (Oct.18, 1989). The Board changed the name to use the federal name, “1,2-dichloro-1,1,2,2-tetrafluoroethane,” in Omnibus Cleanup of the Volatile Organic Material RACT Rules Applicable to Ozone Nonattainment Areas: Amendments to 35 Ill. Adm. Code 203, 211, 218, and 219, R93-9 (Sep. 9, 1993) when the Board moved the definition from 211.122 to 211.7150 and deleted a parallel definition at 203.145. The Board added the hyphen to correct the name to “1,2-dichloro-1,1,2,2-tetrafluoroethane” in Exemptions from the Definition of VOM, USEPA Amendments (July 1, 1994 through December 31, 1994), R95-2 (July 7, 1995).

1,1-dichloro-2,2,2-trifluoroethane: USEPA used a space instead of a hyphen between “1,1-dichloro” and “2,2,2-trifluoroethane.”

USEPA used the names “dichlorotrifluoroethane” and “ethane, 2,2-dichloro-1,1,1-trifluoro-” when adding the exclusion at 54 Fed. Reg. 1987 (Jan. 18, 1989). USEPA used



“dichlorotrifluoroethane” when codifying the definition of VOC as 40 C.F.R. 51.100(s) at 56 Fed. Reg. 11387 (Mar. 18, 1991). USEPA changed the name to “1,1,1-trifluoro 2,2-dichloroethane” in the course of adopting other exclusions at 59 Fed. Reg. 50696 (Oct. 5, 1994).

The Board adopted the exclusion as “dichlorotrifluoroethane” in Exemptions from the Definition of VOM, R89-8 (Oct.18, 1989). The Board changed the name to use the federal name, “1,1,1-trifluoro 2,2-dichloroethane,” in Omnibus Cleanup of the Volatile Organic Material RACT Rules Applicable to Ozone Nonattainment Areas: Amendments to 35 Ill. Adm. Code 203, 211, 218, and 219, R93-9 (Sep. 9, 1993) when the Board moved the definition from 211.122 to 211.7150 and deleted a parallel definition at 203.145. The Board added the hyphen to correct the name to “1,1-dichloro-1-fluoroethane” in Exemptions from the Definition of VOM, USEPA Amendments (July 1, 1994 through December 31, 1994), R95-2 (July 7, 1995).

3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl)hexane: USEPA added a space between “3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl)” and “hexane.”

USEPA added the space in initial adoption of this exclusion at 69 Fed. Reg. 69290 (Nov. 29, 2004).

The Board adopted the exclusion, correcting the name to “3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl)hexane” by replacing the space with a hyphen in Exemptions from the Definition of VOM, USEPA Amendments (July 1, 2004 through December 31, 2004), R05-16 (May 19, 2005).

1,1,1,2,2,3,3-heptafluoro-3-methoxypropane: USEPA used a hard-hyphen, rather than an optional hyphen between “1,1,1,2,2,3,3-heptafluoro-3-methoxy” and “propane.”

USEPA used the hard-hyphen in initial adoption of this exclusion at 69 Fed. Reg. 69290 (Nov. 29, 2004). The hard hyphen was not evident in the *Federal Register* notice, where it fell at the end of a line. The hard hyphen was subsequently evident in the *Code of Federal Regulations*. See, e.g., 40 C.F.R. 51.100(s)(1) (2005).

The Board adopted the exclusion, correcting the name to “1,1,1,2,2,3,3-heptafluoro-3-methoxypropane” in Exemptions from the Definition of VOM, USEPA Amendments (July 1, 2004 through December 31, 2004), R05-16 (May 19, 2005).

**Table 6:**  
**Listing of Excluded Chemicals by USEPA Designation,**  
**with IUPAC Names, Alternative Names, and CAS Numbers**

USEPA Name	IUPAC Name	Alternative Names	CAS Number
methane	methane	methyl hydride	74-82-8
ethane	ethane	methylmethane bimethyl ethyl hydride	74-84-0

USEPA Name	IUPAC Name	Alternative Names	CAS Number
methylene chloride (dichloromethane)	dichloromethane	methylene chloride	75-09-2
1,1,1-trichloroethane (methyl chloroform)	1,1,1-trichloroethane	methyltrichloro- methane	71-55-6
1,1,2-trichloro-1,2,2- trifluoroethane (CFC- 113)	1,1,2-trichloro-1,2,2- trifluoroethane		76-13-1
trichlorofluoromethane (CFC-11)	trichlorofluoromethane	trichloromonfluoro- methane	75-69-4
dichlorodifluoromethan e (CFC-12)	dichlorodifluoromethan e		75-71-8
chlorodifluoromethane (HCFC-22)	chlorodifluoromethane		75-45-6
trifluoromethane (HFC-23)	trifluoromethane	fluoroform	75-46-7
1,2-dichloro-1,1,2,2- tetrafluoroethane (CFC-114)	1,2-dichloro-1,1,2,2- tetrafluoroethane	cryofluorane 1,1,2,2-tetrafluoro-1,2- dichloroethane 1,2- dichlorotetrafluoroetha ne	76-14-2
chloropentafluoro- ethane (CFC-115)	chloropentafluoro- ethane	1-chloro-1,1,2,2,2- pentafluoroethane	76-15-3
1,1,1-trifluoro-2,2-di- chloroethane (HCFC- 123)	1,1-dichloro-2,2,2-tri- fluoroethane	2,2-dichloro-1,1,1- trifluoroethane 1,1,1-trifluoro-2,2- dichloroethane dichloro(trifluoro- methyl)methane	306-83-2
1,1,1,2-tetrafluoro- ethane (HFC-134a)	1,1,1,2-tetrafluoro- ethane	norflurane	811-97-2
1,1-dichloro-1-fluoro- ethane (HCFC-141b)	1,1-dichloro-1-fluoro- ethane	dichlorofluoroethane	1717-00-6
1-chloro-1,1-difluoro- ethane (HCFC-142b)	1-chloro-1,1-difluoro- ethane	chlorodifluoroethane 1,1-difluoro-1-chloro- ethane chloroethylidene fluoroide	75-68-3

USEPA Name	IUPAC Name	Alternative Names	CAS Number
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)	2-chloro-1,1,1,2-tetrafluoroethane	1-chloro-1,2,2,2-tetrafluoroethane 1,1,1,2-tetrafluoro-2-chloroethane chlorotetrafluoroethane	2837-89-0
pentafluoroethane (HFC-125)	pentafluoroethane	1,1,1,2,2-pentafluoroethane	354-33-6
1,1,2,2-tetrafluoroethane (HFC-134)	1,1,2,2-tetrafluoroethane		359-35-3
1,1,1-trifluoroethane (HFC-143a)	1,1,1-trifluoroethane	methylfluoroform 1,1,1-trifluoroform	420-46-2
1,1-difluoroethane (HFC-152a)	1,1-difluoroethane	ethylidene difluoride ethylene fluoride	75-37-6
parachlorobenzotrifluoride (PCBTF)	1-chloro-4-(trifluoromethyl)benzene	4-chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene ( <i>p</i> -chlorophenyl)trifluoromethane <i>p</i> -chlorobenzotrifluoride <i>p</i> -trifluoromethylphenyl chloride	98-56-6
acetone	propan-2-one	methyl ketone	67-64-1
perchloroethylene (tetrachloroethylene)	tetrachloroethene	1,1,2,2-tetrachloroethylene	127-18-4
3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	1,1-dichloro-2,2,3,3,3-pentafluoropropane	3,3-dichloro-1,1,1,2,2-pentafluoropropane	422-56-0
1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	1,3-dichloro-1,1,2,2,3-pentafluoropropane	1,3-dichloro-1,2,2,3,3-pentafluoropropane	507-55-1
1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee)	1,1,1,2,2,3,4,5,5,5-decafluoropentane	2H,3H-decafluoropentane 2,3-dihydroperfluoropentane	138495-42-8
difluoromethane (HFC-32)	difluoromethane	methylene difluoride	75-10-5
ethylfluoride (HFC-161)	fluoroethane	ethyl fluoride	353-36-6

USEPA Name	IUPAC Name	Alternative Names	CAS Number
1,1,1,3,3,3-hexafluoropropane (HFC-236fa)	1,1,1,3,3,3-hexafluoropropane	2,2-dihydroperfluoropropane bistrifluoromethylmethane	690-39-1
1,1,2,2,3-pentafluoropropane (HFC-245ca)	1,1,2,2,3-pentafluoropropane		679-86-7
1,1,2,3,3-pentafluoropropane (HFC-245ea)	1,1,2,3,3-pentafluoropropane		24270-66-4
1,1,1,2,3-pentafluoropropane (HFC-245eb)	1,1,1,2,3-pentafluoropropane		431-31-2
1,1,1,3,3-pentafluoropropane (HFC-245fa)	1,1,1,3,3-pentafluoropropane		460-73-1
1,1,1,2,3,3-hexafluoropropane (HFC-236ea)	1,1,1,2,3,3-hexafluoropropane		431-63-0
1,1,1,3,3-pentafluorobutane (HFC-365mfc)	1,1,1,3,3-pentafluorobutane		406-58-6
chlorofluoromethane (HCFC-31)	chlorofluoromethane	methylene chloride fluoride	593-70-4
1-chloro-1-fluoroethane (HCFC-151a)	1-chloro-1-fluoroethane	1-chlorofluoroethane	1615-75-4
1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a)	1,2-dichloro-1,1,2-trifluoroethane	1,1,2-trifluoro-1,2-dichloroethane	354-23-4
1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane (C <sub>4</sub> F <sub>9</sub> OCH <sub>3</sub> or HFE-7100)	1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane	methyl perfluorobutyl ether	163702-07-6
2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF <sub>3</sub> ) <sub>2</sub> CFCF <sub>2</sub> OCH <sub>3</sub> )	2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane	methyl perfluoroisobutyl ether	163702-08-7
1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane (C <sub>4</sub> F <sub>9</sub> OC <sub>2</sub> H <sub>5</sub> or HFE-7200)	1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane	ethyl perfluorobutyl ether	163702-05-4
2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane ((CF <sub>3</sub> ) <sub>2</sub> CFCF <sub>2</sub> OC <sub>2</sub> H <sub>5</sub> )	2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane	ethyl perfluoroisobutyl ether	163702-06-5

USEPA Name	IUPAC Name	Alternative Names	CAS Number
methyl acetate	methyl acetate methyl ethanoate	acetic acid methyl ester	79-20-9
1,1,1,2,2,3,3-heptafluoro-3-methoxypropane (n-C <sub>3</sub> F <sub>7</sub> OCH <sub>3</sub> , HFE-7000)	1,1,1,2,2,3,3-heptafluoro-3-methoxypropane	perfluoropropyl methyl ether	375-03-1
3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl)hexane (HFE-7500)	3-ethoxy-1,1,1,2,3,4,4,5,5,6,6,6-dodecafluoro-2-(trifluoromethyl)hexane	3-ethoxyperfluoro(2-methylhexane)	297730-93-9
1,1,1,2,3,3,3-heptafluoropropane (HFC 227ea)	1,1,1,2,3,3,3-heptafluoropropane	apaflurane 2-hydroheptafluoropropane 2-hydroperfluoropropane 2H-heptafluoropropane	431-89-0
methyl formate (HCOOCH <sub>3</sub> )	methyl formate methyl methanoate	formic acid methyl ester	107-31-3
1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-trifluoromethylpentane (HFE-7300)	1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane		132182-92-4
propylene carbonate	4-methyl-1,3-dioxolan-2-one	4-methyl-2-oxo-1,3-dioxolane carbonic acid cyclic propylene ester 1,2-propanediol carbonate 1,2-propanediyl carbonate 1-methylethylene carbonate	108-32-7
dimethyl carbonate	dimethyl carbonate dimethyl carbonic acid ester	methyl carbonate	616-38-6
<i>trans</i> -1,3,3,3-tetrafluoropropene	(1 <i>E</i> )-1,3,3,3-tetrafluoropropene		29118-24-9
HCF <sub>2</sub> OCF <sub>2</sub> H (HFE-134)	(difluoromethoxy)-difluoromethane	oxybis(difluoromethane)	1691-17-4

USEPA Name	IUPAC Name	Alternative Names	CAS Number
HCF <sub>2</sub> OCF <sub>2</sub> OCF <sub>2</sub> H (HFE-236cal2)	bis(difluoromethoxy)- difluoromethane		78522-47-1
HCF <sub>2</sub> OCF <sub>2</sub> CF <sub>2</sub> OCF <sub>2</sub> H (HFE-338pcc13)	1,2-bis(difluoromethoxy)-1,1,2,2-tetrafluoroethane		188690-78-0
HCF <sub>2</sub> OCF <sub>2</sub> OCF <sub>2</sub> CF <sub>2</sub> O CF <sub>2</sub> H (H-Galden1040x or H-Galden ZT 130 (or 150 or180))	1-(difluoromethoxy)-2- ((difluoromethoxy)- difluoromethoxy)- 11,22-tetrafluoroethane	HFE 43-10pccc124	188690-77-9
<i>trans</i> 1-chloro-3,3,3- trifluoroprop-1-ene	(1 <i>E</i> )-1-chloro-3,3,3- trifluoroprop-1-ene		102687-65-0
2,3,3,3- tetrafluoropropene	2,3,3,3-tetrafluoroprop- 1-ene	HFC-1234yf	754-12-1
2-amino-2-methyl-1- propanol	2-amino-2-methyl- propan-1-ol	2-amino-2-methyl- propanol aminomethyl propanol 2-aminoisobutanol isobutanol-2-amine β-aminoisobutanol 2-hydroxymethyl-2- propylamine 2-methyl-2-amino- propanol hydroxy- <i>tert</i> -butyl- amine AMP	124-68-5
t-butylacetate	1,1-dimethylethyl acetic acid ester	<i>tert</i> -butyl acetic acid ester	540-88-5