(vi) Spectator Area FOXTROT (''F'') is limited to vessels over 65.6 feet (20 meters) in length. Vessels desiring to use area FOXTROT (''F'') may begin entering the designated spectator area at 8:00 p.m. and must be in a holding position no later than 9:00 p.m. Vessels must depart spectator area FOXTROT (''F'') without delay following the conclusion of the fireworks display.

(vii) Spectator Area Golf (''G'') is limited to vessels less than or equal to 65.6 feet (20 meters) in length. Vessels desiring to use spectator area GOLF (''G'') may enter the area starting at 8:00 p.m.

(3) During periods of enforcement all persons and vessels in the regulated areas must comply with all lawful orders and directions from the COTP or their designated representative.

(4) During periods of enforcement, the COTP or their designated representative may restrict the number of vessels allowed within the regulated area to prevent overcrowding and ensure safe navigation. Once the COTP or their designated representative determines that the regulated area has reached a safe capacity, no additional vessels will be allowed to enter unless specifically authorized by the COTP or their designated representative.

(5) The operation of *personal watercraft* is prohibited in any regulated areas.

(6) Vessel operators desiring to enter or operate within the regulated areas outside the restrictions identified in (c)(2) of this section should contact the COTP or their designated representative at 844–NYC–USCG or on VHF 16 to obtain permission.

(7) Non-participant and Spectator Vessels must not anchor, block, loiter or impede the transit of event participants or official patrol vessels in the regulated areas during the enforcement period and times unless authorized by the COTP or their designated representative.

(d) *Enforcement periods.* (1) This section is in effect from 5:30 p.m. July 4, 2026, to 11:30 p.m. July 5, 2026. It will only be subject to enforcement, however, from 5:30 p.m. through 11:30 p.m. on Saturday, July 4, 2026, unless the event is delayed because of weather conditions, in which case it may be subject to enforcement of those same hours on July 5, 2026.

(2) The COTP will provide advance notice of the enforcement period for the regulated areas as well as any changes to the enforcement times of the regulated area through local notice to mariners, broadcast notice to mariners, and through on-scene notice by the COTP's designated representative or official patrol vessels.

Jonathan A. Andrechik,

Captain, U.S. Coast Guard, Captain of the Port, Sector New York.

[FR Doc. 2026–06619 Filed 4–3–26; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 82

[EPA–HQ–OAR–2024–0503; FRL–12207–03–OAR]

RIN 2060–AW45

Protection of Stratospheric Ozone: Listing of Substitutes Under the Significant New Alternatives Policy Program in Refrigeration and Air Conditioning and Fire Suppression; Supplemental Notice of Proposed Rulemaking

AGENCY: Environmental Protection Agency (EPA).

ACTION: Supplemental proposed rule.

SUMMARY: Pursuant to the U.S. Environmental Protection Agency's Significant New Alternatives Policy program, this action proposes to list the refrigerant 2,3,3,3-tetrafluoropropene, also known as HFO-1234yf, as acceptable, subject to use conditions, in the motor vehicle air conditioning end-use for retrofit of heavy-duty pickup trucks and complete heavy-duty vans. This action supplements the Agency's November 10, 2025, proposal with respect to the proposed listings in the motor vehicle air conditioning end-use for retrofit of heavy-duty pickup trucks and heavy-duty vans (both complete and incomplete vans). The EPA is also supplementing that proposal to clarify the intended scope of that proposed rule. The EPA is providing an opportunity for public comment on the additional listing and the clarification. The EPA is not reopening the comment period for any portions of the November 10, 2025, proposal which are not explicitly addressed in this supplemental proposal.

DATES: Comments on this supplemental proposal must be received on or before May 6, 2026 unless a public hearing is held. If a public hearing is held, comments on this supplemental proposal must be received on or before 30 days after the date of the public hearing. *Public hearing:* Any party requesting a public hearing must notify the contact listed in the **FOR FURTHER INFORMATION CONTACT** section, which is Emily Maruyama at email address: *maruyama.emily@epa.gov* by 5 p.m. Eastern Daylight Time on or before April 13, 2026. If a public hearing is held, it will take place on or around April 21, 2026. Please refer to the **SUPPLEMENTARY INFORMATION** section for additional information on the public hearing.

ADDRESSES: You may send comments, identified by Docket ID No. EPA–HQ–OAR–2024–0503 by any of the following methods:

- *Federal Rulemaking Portal: https://www.regulations.gov* (our preferred method). Follow the online instructions for submitting comments.
- *Email: a-and-r-Docket@epa.gov.* Include Docket ID No. EPA–HQ–OAR–2024–0503 in the subject line of the message.
- *Mail:* U.S. Environmental Protection Agency, EPA Docket Center, Air and Radiation Docket, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.
- *Hand Delivery or Courier:* EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center's hours of operations are 8:30 a.m. to 4:30 p.m., Monday–Friday (except Federal Holidays).

Instructions: All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to *https://www.regulations.gov,* including personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the ''Public Participation'' heading of the **SUPPLEMENTARY INFORMATION** section of this document. For information on EPA Docket Center services, please visit us online at *https://www.epa.gov/dockets.*

If a public hearing is requested on or before April 13, 2026, the EPA will post an update at *https://www.epa.gov/snap.* The EPA does not intend to publish a document in the **Federal Register** announcing updates. The public hearing will be held on or around April 21, 2026. Information on the hearing including the time and URL will be posted on the EPA's Stratospheric Ozone website at *https://www.epa.gov/snap.* Refer to the section titled, Public Participation for additional information.

FOR FURTHER INFORMATION CONTACT: For information about this proposed rule, contact Emily Maruyama, Chemicals, Coatings, and Products Division, Office of Clean Air Programs (Mail Code 6205A), Environmental Protection Agency, 1200 Pennsylvania Ave. NW, Washington, DC 20460; telephone

number: (202) 564–2809; email address: *maruyama.emily@epa.gov.* Notices and rulemakings under the EPA's Significant New Alternatives Policy program are available on the EPA's website at *https://www.epa.gov/snap/snap-regulations.*

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. Throughout this preamble the use of ''we,'' ''us,'' or ''our'' is intended to refer to the EPA. We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AC Air Conditioning
ANSI American National Standards Institute
ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers
CAA Clean Air Act
CAS Reg. No. Chemical Abstracts Service Registry Identification Number
CBI Confidential Business Information
CFC Chlorofluorocarbon
CFR Code of Federal Regulations
CO_2 Carbon Dioxide
CRP Cooperative Research Program
DIY Do it yourself
EEAP Environmental Effects Assessment Panel
EPA United States Environmental Protection Agency
FR Federal Register
GVWRv Gross Vehicle Weight Rating
HCFC Hydrochlorofluorocarbon
HD Heavy-duty
HFC Hydrofluorocarbon
HFO Hydrofluoroolefin
ICF ICF International, Inc.
LD Light-duty
LFL Lower Flammability Limit
LMDV Light- and medium-Duty Vehicle
MD Medium-duty
mJ Millijoules
MVAC Motor Vehicle Air Conditioning or Motor Vehicle Air Conditioner
MY Model Year
NAAQS National Ambient Air Quality Standard
NAICS North American Industrial Classification System
NPRM Notice of Proposed Rulemaking
ODS Ozone-Depleting Substances
OEL Occupational Exposure Limit
OEM Original Equipment Manufacturer
OMB United States Office of Management and Budget
PBI Proprietary Business Information
PMN Pre-Manufacture Notice
ppm Parts Per Million
PRA Paperwork Reduction Act
RFA Regulatory Flexibility Act
SAE SAE International, previously known as the Society of Automotive Engineers
SDS Safety Data Sheet
SIP State Implementation Plan
SNAP Significant New Alternatives Policy
SNUR Significant New Use Rule
TFA Trifluoroacetic Acid
TLV Threshold Limit Value
TWA Time Weighted Average
UMRA Unfunded Mandates Reform Act
VOC Volatile Organic Compounds

Table of Contents

I. Executive Summary

A. Purpose of the Regulatory Action

The EPA is proposing a new listing after our evaluation of human health and environmental information for one substitute under Clean Air Act (CAA) section 612, Significant New Alternatives Policy (SNAP) program. The Agency is proposing this new listing in the refrigeration and air conditioning (AC) sector based on the information the EPA included in the docket. This supplemental notice of proposed rulemaking, hereafter referred to as the ''supplemental proposal'' or ''supplemental action,'' would provide a new refrigerant option in specific uses, thereby increasing flexibility for industry. The EPA is also supplementing the Agency's November 10, 2025, Notice of Proposed Rulemaking (NPRM), hereafter referred to as the ''2025 NPRM,'' to clarify the intended scope of that proposal.[1]

B. Summary of the Major Provisions of the Regulatory Action

This action proposes to list 2,3,3,3-tetrafluoropropene,[2] also known as hydrofluoroolefin (HFO)-1234yf or R-1234yf, hereafter referred to as ''HFO-1234yf,'' as acceptable, subject to use conditions, in the motor vehicle air conditioning (MVAC) end-use for retrofit of heavy-duty (HD) pickup trucks and complete HD vans. This proposal supplements the 2025 NPRM with respect to the proposed listings in the MVAC end-use for retrofit of HD pickup trucks and HD vans (both complete and incomplete vans). In the 2025 NPRM, the EPA proposed to list three other substitutes as acceptable, subject to use conditions, for similar end-uses. The EPA is supplementing the 2025 NPRM to clarify the intended scope of that proposal for R-444A as acceptable, subject to use conditions, in the MVAC end-use. In the 2025 NPRM, the EPA proposed a listing for R-444A in the MVAC end-use for retrofit of HD pickup trucks and HD vans (both complete and incomplete). The Agency included incomplete HD vans in error and is clarifying that we intended for this proposed listing to apply to HD pickup trucks and complete HD vans only. The scope of the proposals in the 2025 NPRM for the two other substitutes proposed in this end-use, R-456A and R-480A, are not affected by this supplemental proposal and thus remain unchanged.

The proposed new listing for HFO-1234yf would appear as a change to appendix B of 40 Code of Federal Regulations (CFR) part 82, subpart G, within row 12 in the table titled ''Refrigerants—Acceptable Subject to Use Conditions.'' The clarification of the intended scope of the 2025 NPRM listing for R-444A in the MVAC end-use

[1] *See* 90 FR 50766 (November 10, 2025).
[2] CAS Reg. No. 754–12–1.

discussed in section V of this supplemental proposal would appear as a change to appendix B of 40 CFR part 82, subpart G, within row 10 in the same table titled ''Refrigerants—Acceptable Subject to Use Conditions.'' In this supplemental proposal, the EPA is not proposing changes beyond these. The specific proposed regulatory changes to appendix B are available in a document in the docket under the title ''Proposed Changes to Appendix B for SNAP 27 Supplemental Proposal.'' [3]

II. Public Participation

A. Written Comments

Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2024–0503 at *https://www.regulations.gov* (our preferred method), or the other methods identified in the **ADDRESSES** section. Once submitted, comments cannot be edited or removed from the docket. The EPA may publish any comment received in the public docket. Do not submit to the EPA's docket at *https://www.regulations.gov* any information you consider to be Confidential Business Information (CBI), Proprietary Business Information (PBI), 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 generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the web, cloud, or other file sharing system). Please visit *https://www.epa.gov/dockets/commenting-epa-dockets* for additional submission methods; the full EPA public comment policy; information about CBI, PBI, or multimedia submissions; and general guidance on making effective comments.

B. Participation in Virtual Public Hearing

The EPA may hold a virtual public hearing if the Agency receives a request to hold one. Any party requesting a public hearing must notify the contact listed in the **FOR FURTHER INFORMATION CONTACT** section, which is Emily Maruyama at email address: *maruyama.emily@epa.gov* by 5 p.m. Eastern Daylight Time on or before April 13, 2026. If a virtual public hearing is held, it will take place on or around April 21, 2026 and further information will be provided on the EPA's Stratospheric Ozone website at *https://www.epa.gov/snap.*

The EPA will make every effort to follow the schedule as closely as possible on the day of the hearing; however, please plan for the hearings to run either ahead of schedule or behind schedule. Each commenter will have three to five minutes to provide oral testimony. The EPA encourages commenters to provide a copy of their oral testimony electronically by emailing it to *maruyama.emily@epa.gov.* The EPA also recommends submitting the text of your oral comments as written comments to the rulemaking docket EPA–HQ–OAR–2024–0503. Written statements and supporting information submitted during the comment period will be considered with the same weight as oral comments and supporting information presented at the public hearing. The EPA may ask clarifying questions during the oral presentations but will not respond to the presentations at that time.

Please note that any updates made to any aspect of the hearing will be posted online at *https://www.epa.gov/snap.* While the EPA expects the hearing to go forward as set forth above, please monitor our website or contact Emily Maruyama, 202–564–2809, *maruyama.emily@epa.gov* to determine if there are any updates. The EPA does not intend to publish a document in the **Federal Register** (FR) announcing updates.

III. General Information

A. Does this action apply to me?

The following list identifies regulated entities that may be affected by this rulemaking and their respective North American Industrial Classification System (NAICS) codes:

- All Other Basic Organic Chemical Manufacturing (325199).
- Motor Vehicle Manufacturing (3361).
- Motor Vehicle Parts Manufacturing (3363).
- Recyclable Material Merchant Wholesalers (423930).
- General Automotive Repair (811111).

This list is not intended to be exhaustive, but rather to provide a guide for readers regarding entities likely to be affected by this action. To determine whether your facility, company, business, or organization could be affected by this action, you should carefully examine the regulations at 40 CFR part 82, subpart G, and the proposed revisions. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

B. What action is the Agency proposing to take?

The EPA is proposing to list HFO-1234yf as acceptable, subject to use conditions, in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans. The EPA is also supplementing the 2025 NPRM to clarify the intended scope of that proposal. Specifically, in the 2025 NPRM, the EPA proposed to list R-444A as acceptable, subject to use conditions, in the MVAC end-use for retrofit of complete and incomplete HD vans. This supplemental action is clarifying that the EPA intended for this proposed listing to apply only to complete HD vans.

C. What is the Agency's authority for taking this action?

This proposal supplements the 2025 NPRM. See the 2025 NPRM for a full discussion of the Agency's authority for taking this action.

D. What are the guiding principles of the SNAP program and what are the SNAP criteria for evaluating substitutes?

This proposal supplements the 2025 NPRM. See the 2025 NPRM for a full discussion of the guiding principles of the SNAP program and the SNAP criteria for evaluating substitutes.

E. Children's Environmental Health

This action is subject to the EPA's Policy on Children's Health (*https://www.epa.gov/children/childrens-health-policy-and-plan*) because the rule has considerations for human health. Accordingly, we have evaluated the environmental health effects of HFO-1234yf to general population exposure.

In summary, the risk screen for the use of HFO-1234yf in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans found that this substitute is not expected to cause a significant risk to human health in the general population when manufactured for use and used as a refrigerant in HD pickup truck and complete HD van AC systems. Additionally, the EPA found that the toxicity risks of using HFO-1234yf in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans are comparable to or lower than that of other available substitutes in the same end-use. The risk screen found that HFO-1234yf can be used without exceeding the recommended

[3] To see the adjustments to the proposed regulatory text discussed in this supplemental action in context with all the other proposed changes and listings discussed in the 2025 NPRM, see the document in the docket for this rulemaking under the title ''Proposed Regulatory Text for SNAP Rule 27—Supplemental Proposal.''

occupational exposure limit (OEL) of 500 ppm (8-hr OEL); thus, the toxicity risks of this refrigerant are comparable to those of other acceptable substitutes in MVACs, which also are used without exceeding their OELs. The risk screen also found that HFO-1234yf in HD pickup trucks and complete HD vans does not pose a significant risk of end-use exposure, provided systems are installed in appropriate spaces with proper engineering controls, emergency response plans, and according to guidelines from the manufacturer, standards, and the safety data sheet. While the EPA has not conducted a separate analysis of risks to infants and children associated with this rule, the rule does contain use conditions that would reduce exposure risks to the general population, with the reduction of exposure being most important to the most sensitive individuals.

The results of this evaluation are contained in section IV.D. of this preamble and in the risk screen titled ''Risk Screen on Substitutes in Motor Vehicle Air Conditioning (Heavy-Duty Pickup Trucks and Complete Heavy-Duty Vans) (Retrofit Equipment); Substitute: HFO-1234yf (Solstice® yf or Solstice® 1234yf).'' A copy of this document is available in the public docket for this action at Docket ID No. EPA–HQ–OAR–2024–0503.

This action is consistent with the EPA's Policy on Children Health because it provides an additional retrofit option and would not pose additional adverse effects to human health when used in accordance with existing and proposed requirements and as intended by the submitter.

Furthermore, Executive Order 13045 (''*Protection of Children from Environmental Health Risks and Safety Risks*'') applies to this action. Information on how this action is subject to this Executive Order is available in a section of this preamble under the same name.

IV. Proposed Listing for Motor Vehicle Air Conditioning

A. What is the EPA proposing in this action?

The EPA is proposing to list HFO-1234yf as acceptable, subject to use conditions, in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans. In the 2025 NPRM, the EPA proposed to list three substitutes, R-444A, R-456A, and R-480A as acceptable, subject to use conditions, in the MVAC end-use for retrofit of HD pickup trucks and complete and incomplete HD vans. During the public comment period, the EPA received comments and feedback from stakeholders highlighting that the proposal did not include a listing of HFO-1234yf in the MVAC end-use for retrofit of HD pickup trucks and HD vans. The EPA reviewed these comments and agrees that the Agency should have included all four refrigerants for this end-use consistent with other MVAC listings in the 2025 NPRM and is issuing this supplemental proposal to add this listing. To support this listing, the Agency has provided in the docket the risk screen for HFO-1234yf for this end-use and proposes to find HFO-1234yf acceptable, subject to use conditions, in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans.

The 2025 NPRM proposed to list HFO-1234yf as acceptable, subject to use conditions, in the MVAC end-use for retrofit of light- and medium-duty vehicles (LMDVs). HFO-1234yf has not otherwise been listed as acceptable for other MVAC retrofit applications. The proposed listing for HFO-1234yf in this supplemental action would allow for retrofits of chlorofluorocarbon (CFC)-12 MVACs as well as for retrofits of MVACs using any of the refrigerants the SNAP program lists as acceptable or acceptable, subject to use conditions, in this end-use.

B. Background on MVACs in HD Pickup Trucks and HD Vans

The SNAP program uses the term MVAC broadly to describe a wide variety of non-stationary AC systems that provide passenger comfort cooling for LMDVs, HD vehicles, nonroad vehicles, buses, and trains. The SNAP MVAC end-use includes systems that may also be subject to other CAA regulatory programs, including for example, where those systems fit within the regulatory definition of ''MVAC'' under 40 CFR 82.32,[4] or the definition of an ''MVAC-like appliance'' [5] or ''appliance'' under 40 CFR 82.152, or both.

To appropriately evaluate human health and environmental risks, the SNAP program considers the type of vehicle in which the proposed alternative would be used. The vehicle types within the MVAC end-use addressed in this supplemental proposal to list HFO-1234yf as acceptable, subject to use conditions, include limited types of vehicles, specifically, HD pickup trucks and complete HD vans (*e.g.,* large passenger vehicles such as large pickup trucks or vans). In this supplemental action, the EPA is not making any changes to the proposed MVAC acceptability listings for HFO-1234yf included in the 2025 NPRM (*e.g.,* retrofit LMDVs, new HD on-highway vehicles, and new buses) and is not reopening the comment period for those proposed listings.

HD vehicles are often subdivided by vehicle weight classifications, as defined by the vehicle's gross vehicle weight rating (GVWR), which is a measure of the combined curb (empty) weight and cargo carrying capacity of the truck. HD vehicles have GVWRs above 8,500 pounds. HD pickup trucks and HD vans are Class 2b and 3 vehicles with GVWRs between 8,501 and 14,000 pounds.

The types of vehicles for which the EPA is proposing to list HFO-1234yf for retrofit use as acceptable, subject to use conditions, in this supplemental action, are in many ways more similar to light-duty (LD) or medium-duty (MD) vehicles than they are to the HD vehicles with a higher GVWR classification. These vehicle types are similar to LD vehicles technologically and most are manufactured by companies with major LD markets in the United States and in a similar manner to LD vehicles.[6] In many cases, these types of HD vehicles are versions of their LD counterparts.[7] The primary difference between HD pickup trucks and HD vans and their LD counterpart vehicles is that HD pickup trucks and HD vans are occupational or work vehicles that are designed for much higher towing and payload capabilities than are LD pickup trucks and LD vans. HD pickup trucks and HD vans share many design similarities with their

[4] As defined in 40 CFR 82.32, Motor vehicle air conditioners mean mechanical vapor compression refrigeration equipment used to cool the driver's or passenger's compartment of any motor vehicle. This definition is not intended to encompass the hermetically sealed refrigeration systems used on motor vehicles for refrigerated cargo and the air conditioning systems on passenger buses using hydrochlorofluorocarbon (HCFC)–22 refrigerant. *See also* 40 CFR 82.152 (defining MVAC to mean ''any appliance that is a motor vehicle air conditioner as defined in subpart B of 40 CFR part 82'').

[5] As defined in 40 CFR 82.152 MVAC-like appliance means a mechanical vapor compression, open-drive compressor appliance with a full charge of 20 pounds or less of refrigerant used to cool the driver's or passenger's compartment of off-road vehicles or equipment. This includes, but is not limited to, the air-conditioning equipment found on agricultural or construction vehicles. This definition is not intended to cover appliances using R–22 refrigerant.

[6] This is more broadly true for HD pickup trucks than HD vans because every manufacturer of HD pickup trucks also makes LD pickup trucks, while only some HD van manufacturers also make LD vans (80 FR 40148; July 13, 2015).

[7] ICF. (2026a). Technical Support Document for Motor Vehicle Air Conditioning in Limited Heavy-Duty Applications.

lighter counterparts. For example, MVAC systems in HD pickup trucks and HD vans generally have a similar configuration and use similar components as their lighter counterparts. Differences may exist in terms of cooling capacity (*e.g.,* based on cabin volume), system layout (*e.g.,* the number of evaporators), and the durability requirements due to longer truck life.[8]

All types of HD vehicles can be sold as ''complete'' or ''incomplete'' vehicles.[9] Approximately 90 percent of HD pickup trucks and HD vans are ¾-ton and 1-ton pickup trucks, 15-passenger vans, and large work vans that are sold by vehicle manufacturers as complete vehicles.[10] Complete vehicles are sold by vehicle manufacturers to end users with no secondary manufacturer making substantial modifications prior to registration and use. Incomplete vehicles are sold by vehicle manufacturers to secondary manufacturers without the primary load-carrying device or container attached.[11]

Examples of modifications by secondary manufacturers to HD pickup trucks are installing a flatbed platform or tool storage bins. The EPA is not aware of any equipment added by a secondary manufacturer to an incomplete HD pickup truck that would result in a secondary manufacturer modifying or adjusting the already installed MVAC system to provide cooling capacity.

Incomplete HD vans are typically sold with no enclosed cabin area behind the driver's seat, and secondary manufacturer modifications could include applications such as conversion to ambulances, shuttle vans, and motor homes. Incomplete HD vans may include original equipment manufacturer (OEM) MVACs that are identical to those installed in the complete HD van on which the incomplete model is based. In some cases, these systems are designed solely for cooling the front driver area, while other systems are manufactured by the OEM with additional capability to provide cooling behind the driver area to the cabin after modification.

MVACs across all vehicle types are typically charged during vehicle manufacture. Incomplete HD vehicles are modified by secondary manufacturers and that modification may or may not involve the installation of additional AC or refrigeration equipment.[12] While some secondary manufacturers use the OEM MVAC system with no modification to the contained refrigerant system (hoses, connections, heat exchangers, compressor, etc.), this is not a uniform practice. At the time of this supplemental action, the EPA does not have sufficient information on the potential for modifications to OEM-installed MVAC systems of incomplete HD vans by secondary manufacturers and the impact of those modifications on the safe use of HFO-1234yf. For this reason, the EPA is not proposing to find HFO-1234yf acceptable, subject to use conditions, in the MVAC end-use for retrofit of incomplete HD vans in this supplemental proposal.

Historically, the class I ozone-depleting substances (ODS) refrigerant CFC–12 was the primary refrigerant used in MVACs for passenger vehicles and trucks. In the initial 1994 SNAP rulemaking, hydrofluorocarbon (HFC)–134a, amongst other substitutes, was listed as acceptable for use in new and retrofit MVACs, including HD pickup trucks and HD vans.[13] Since then, the EPA has listed additional alternatives for MVACs as acceptable, subject to use conditions, for use in new HD pickup trucks and complete HD vans, including HFO-1234yf, HFC–152a, and carbon dioxide (R–744).

The EPA previously listed HFO-1234yf as acceptable, subject to use conditions, in newly manufactured HD pickup trucks and complete HD vans.[14] As of model year (MY) 2026, both HFO-1234yf and HFC–134a are used in new HD pickup trucks that are manufactured and imported in the United States. New complete HD vans continue to primarily use HFC–134a.[15]

The EPA considers other relevant regulatory programs when developing listing decisions and use conditions. For example, CAA section 609 and implementing regulations in 40 CFR part 82, subpart B address the repair and servicing of MVACs as well as technician training and certification. CAA section 608 and implementing regulations in 40 CFR part 82, subpart F restrict the sale of refrigerant and address disposal and other activities involving MVACs that are not regulated under CAA section 609.

By considering the regulatory requirements that already exist, consistent with the SNAP program's guiding principles, the EPA has been able to limit the use conditions the Agency would have otherwise considered, particularly for retrofits. See the 2025 NPRM for a full discussion of the EPA's regulatory approach under CAA sections 609 and 612 regarding the repair and servicing of MVACs and recovery, recycling, and recharging equipment.

C. What are the ASHRAE classifications for refrigerant flammability and toxicity?

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Standard 34–2024 assigns a safety group for each refrigerant, which consists of two to three alphanumeric characters (*e.g.,* A2L or B1).[16] The initial character indicates the toxicity, and the numeral, with or without suffix letter, denotes the flammability. HFO-1234yf is in the A2L Safety Group. ASHRAE classifies Class A refrigerants as refrigerants for which toxicity has not been identified at concentrations less than or equal to 400 parts per million (ppm) by volume, based on data used to determine threshold limit value-time-weighted average (TLV–TWA) or consistent indices. Throughout this document, refrigerants in the flammability class of ''2L'' are referred to as lower flammability refrigerants. See the 2025 NPRM for a full discussion of the ASHRAE classifications for refrigerant flammability and toxicity.

D. What is refrigerant HFO-1234yf and how does it compare to other refrigerants in this end-use?

The EPA is proposing to list HFO-1234yf as acceptable, subject to use conditions, in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans.

The redacted submission and supporting documentation for this proposed refrigerant are in the docket.[17] The EPA performed a risk screening assessment to examine the human health and environmental risks of this substitute, also available in the docket.[18]

[8] ICF. (2026a).

[9] *See* 76 FR 57259–60 (September 15, 2011).

[10] ICF. (2026a).

[11] Incomplete HD vehicles can also be sold to and modified by tertiary or subsequent manufacturers. For the purposes of this supplemental proposal, the discussion of modifications made by secondary manufacturers also applies to modifications made by tertiary or subsequent manufacturers.

[12] For example, AC for the rear compartment of an ambulance or shuttle van.

[13] *See* 59 FR 13044 (March 18, 1994).

[14] *See* 81 FR 86778 (December 1, 2016).

[15] ICF. (2026a).

[16] ASHRAE. (2024). ANSI/ASHRAE Standard 34–2024: Designation and Safety Classification of Refrigerants.

[17] *See* Docket ID No. EPA–HQ–OAR–2024–0503.

[18] ICF. (2026b). Risk Screen on Substitutes in Motor Vehicle Air Conditioning (Heavy-Duty Pickup Trucks and Complete Heavy-Duty Vans) (Retrofit Equipment); Substitute: HFO-1234yf (Solstice® yf or Solstice® 1234yf). *See* Docket ID No. EPA–HQ–OAR–2024–0503.

The EPA notes that the environmental, flammability, and toxicity information in this section is similar to the information provided in the 2025 NPRM related to the proposed listing of HFO-1234yf in the MVAC end-use for retrofit of LMDVs. As mentioned in the 2025 NPRM, the environmental, flammability, and toxicity information about this proposed substitute does not differ between LMDV MVACs and HD pickup truck and complete HD van MVACs.

Environmental information: The specific atmospheric effects values can be found in the risk screen developed for HFO-1234yf for the proposed listing in this supplemental action. These were determined consistent with the source information noted in section III.D. of the 2025 NPRM.

HFO-1234yf is excluded from the EPA's regulatory definition of volatile organic compounds (VOCs), which is used for addressing the development of state implementation plans (SIPs) to attain and maintain the National Ambient Air Quality Standard (NAAQS).[19]

HFO-1234yf can break down into trifluoroacetic acid (TFA) in the atmosphere. HFO-1234yf is almost completely transformed into TFA.[20] For more information on TFA, see the response to comments section of SNAP Rule 26.[21]

Flammability information: HFO-1234yf is a lower flammability refrigerant (ASHRAE flammability classification 2L). HFO-1234yf may pose a greater flammability risk than nonflammable substitutes in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans. The flammability risk, determined by the likelihood of exceeding the lower flammability limit (LFL), is evaluated in the risk screen referenced in this section. The EPA is proposing to determine that HFO-1234yf may be used safely since flammability risk can be mitigated by use consistent with the proposed labeling requirements in appendix D of 40 CFR part 82, subpart G, recommendations in the manufacturers' safety data sheet (SDS), and other safety precautions common in the refrigeration and AC industry. The flammability characteristics of HFO-1234yf make the risk of ignition low. HFO-1234yf requires an open flame to ignite, such as a match or lighter, because of its relatively high minimum ignition energy of greater than 5,000 millijoules (mJ).[22] HFO-1234yf has an LFL of 62,000 ppm,[23] and has a low burning velocity [24] compared to refrigerants with flammability classification of 2 such as HFC-152a [25] or with flammability classification of 3 such as hydrocarbon refrigerants.[26] As a result of these flammability characteristics, HFO-1234yf is difficult to ignite, and is generally unable to propagate a flame once ignited (*i.e.,* flames resulting from HFO-1234yf put themselves out).

Consistent with the other proposed listings in the 2025 NPRM, under this supplemental action, HFO-1234yf could be used to retrofit MVACs originally designed for an A1 refrigerant. The EPA considered if this could create additional flammability risk distinct from its use in a new MVAC that is specifically designed with mitigation measures to use a flammable refrigerant. The original submission for HFO-1234yf in new vehicles included analyses that evaluated the flammability and toxicity risks of HFO-1234yf in MVACs that were originally designed for HFC-134a. These analyses consist of reports published in 2008, 2009, and 2013 from the SAE International, previously known as the Society of Automotive Engineers (SAE), Cooperative Research Program (CRP). The vehicles in these analyses did not feature any design changes to address potential flammability. In this way, MVACs used in the original analyses were analogous to vehicles that would be retrofit under this supplemental proposal, because they could be originally designed for an A1 refrigerant.[27] The 2008 report found that the increased flammability risk of HFO-1234yf in a vehicle designed for use with HFC-134a is well below those commonly accepted by the general public.[28] A revised 2009 report found that the risks of HFO-1234yf were low overall, and somewhat less than the toxicity risks posed by R-744.[29] The submitter of HFO-1234yf provided these analyses to the EPA to support the Agency's original consideration of HFO-1234yf in new vehicles, and the Agency based its listing of acceptability in part on the findings of these analyses. The EPA concluded that the risks of HFO-1234yf are comparable to or less than the risks from other available or potentially available alternatives in this end-use that the Agency had already listed or proposed as acceptable (*e.g.,* HFC-152a, HFC-134a, and R-744).[30]

SAE revised its assessment of HFO-1234yf and released a supplemental report in 2013 that contained two new fault tree analyses that included additional ''worst-case scenarios.'' [31] The report revised the probability of a vehicle fire due to ignition of HFO-1234yf in a system featuring no design changes compared to an HFC-134a system to about 3×10^{-12} events per hour of vehicle operation.

The submitter of HFO-1234yf in the MVAC end-use for retrofit of LMDVs and HD pickup trucks and complete HD vans provided an updated fault tree analysis that evaluated the additional risk associated with use of HFO-1234yf specifically in retrofit applications and the EPA considered this new analysis in our review of HFO-1234yf.[32] The analysis only considered scenarios that increased the flammability risk in a retrofit (such as increased risk of mechanical fan failure and electrical fires and less consistent presence and deployment of airbags) and did not

[19] 40 CFR 51.100(s).

[20] EEAP. (2023). Environmental Effects of Stratospheric Ozone Depletion, UV Radiation, and Interactions with Climate Change. 2022 Assessment Report. UNEP, Environmental Effects Assessment Panel. *https://ozone.unep.org/system/files/documents/EEAP-2022-Assessment-Report-May2023.pdf.*

[21] *See* 88 FR 50457–8 (June 13, 2024).

[22] Minor, B. et al. (2009). (111g) Flammability Characteristics of Low GWP Refrigerant HFO-1234yf. *AIChE 2009 Spring Meeting & 5th Global Congress on Process Safety. https://proceedings.aiche.org/conferences/aiche-spring-meeting-and-global-congress-on-process-safety/2009/proceeding/paper/111g-flammability-characteristics-low-gwp-refrigerant-hfo-1234yf.*

[23] *Manufacturer's Safety Data Sheet for HFO-1234yf.* Honeywell (May 23, 2019). *See also* Minor, B. et al. (2009).

[24] A2L refrigerants have a burning velocity of less than 0.1 meters/second (m/s), per International Standards Organization 817 and ASHRAE 34–2024. HFO-1234yf has a burning velocity of 0.015m/s, see Minor, B. et al. (2009).

[25] The burning velocity of HFC-152a is measured at approximately 0.236 m/s. Takizawa, K. et al. (2005). Burning velocity measurement of fluorinated compounds by the spherical-vessel method, *Combustion and Flame,* Volume 141, Issue 3, Pages 298–307: *https://doi.org/10.1016/j.combustflame.2005.01.009.*

[26] The burning velocity of R-290 is at least 0.4 m/s, depending on temperature and pressure. Metghalchi, M. & Keck, J.C. (1980). Laminar Burning Velocity of Propane-Air Mixtures at High Temperature and Pressure. *Combustion And Flame* 38: 143–154 *https://james-keck-memorial-collection.unibs.it/JCKeck-papers/MetghalchiKeck-CombustionFlame-38-143-1980.pdf.*

[27] Gradient Corporation. (2008). Risk Assessment for Alternative Refrigerant HFO-1234yf. (Phase I) Prepared for the Society of Automotive Engineers (SAE) Cooperative Research Project 150.

[28] Gradient Corporation. (2008). Risk Assessment for Alternative Refrigerant HFO-1234yf. Confidential report prepared for SAE International Cooperative Research Program 1234.

[29] Gradient Corporation. (2009). Risk Assessment for Alternative Refrigerants HFO-1234yf and R-744 (CO_2). Confidential report prepared for SAE International Cooperative Research Program 1234.

[30] *See* 76 FR 17491 (March 29, 2011).

[31] Gradient Corporation. (2013a). Additional Risk Assessment of Alternative Refrigerant R-1234yf. Confidential report prepared for SAE International Cooperative Research Program 1234–4.

[32] Gradient Corporation. (2023a). Retrofit Analysis Letter. Prepared for Honeywell International.

consider scenarios that reduced the flammability risk in a retrofit (such as the larger cabin size in older vehicles that would be retrofit). The overall estimated risk was about 8×10^{-12} events per operating hour, which is similar to the risk of vehicle fire due to HFO-1234yf ignition in new MVAC equipment (5×10^{-12} events per operating hour).[33] The actual increased risk is likely lower than this, as the evaluation only considered circumstances that would increase the probability of a vehicle fire and did not consider circumstances that would reduce the probability.

The MVAC systems, vehicle designs, and the potential for exposure for the HD vehicle types for which the EPA is proposing HFO-1234yf for retrofit use as acceptable, subject to use conditions, in this supplemental action are identical or very similar to those of LD vehicles.[34] In 2016, the EPA evaluated how the risks of using HFO-1234yf in new HD pickup trucks and complete HD vans compare to the risks of using HFO-1234yf in new LD vehicles.[35] The EPA presented information on the highest refrigerant charge to passenger compartment volume ratios for different vehicle types and the highest ratio for all HD pickup truck and HD van vehicle types was 410 g/m^3 in HD pickup trucks, which was less than the maximum ratio identified in the analysis for HFO-1234yf in LD vehicles in two seaters, which was 641 g/m^3.[36] The EPA concluded that the available assessments on the use of HFO-1234yf in LD vehicles were sufficiently conservative to account for all possible flammability risks from the use of HFO-1234yf in HD pickup trucks and complete HD vans.[37] Consistent with the approach taken in SNAP Rule 21 when the EPA listed HFO-1234yf in new HD pickup trucks and complete HD vans and relied on analysis for the use of HFO-1234yf in LD vehicles, the EPA proposes to find it appropriate to rely on the same analysis included in this section related to the use of HFO-1234yf in LD vehicle types.[38]

The EPA conducted a risk screen in 2026 for HFO-1234yf in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans to support the proposed listing in this supplemental action. The risk screen found that concentrations of HFO-1234yf did exceed the LFL in the passenger compartment of a HD pickup truck under the modeled worst-case scenario. For the HD pickup truck and HD van vehicle types evaluated in this risk screen, the highest refrigerant charge to passenger compartment ratio was 390 g/m^3 in HD pickup trucks.[39] This ratio is substantially less than the maximum ratio identified for many vehicle types mentioned in the risk screen for HFO-1234yf use in retrofit LMDVs including two seaters (640.75 g/m^3), small pickup trucks (633.27 g/m^3), sport utility vehicles (414.96 g/m^3), and standard pickup trucks (397.84 g/m^3).[40] The lower ratio indicates a relatively lower risk.

As discussed in the 2025 NPRM, the risk screen for HFO-1234yf use for retrofit of LMDVs found that concentrations of HFO-1234yf did exceed the LFL in the passenger compartment under certain worst-case scenarios but remained well below the LFL in more realistic industry consortium field testing. For example, using a simple box model, combining the highest ratio of refrigerant charge to observed passenger compartment size with a catastrophic release of 60 percent of the charge in 60 seconds, resulted in a maximum instantaneous charge of 172,000 ppm, compared to an LFL of 62,000 ppm. However, analysis using the more accurate technique of computational fluid dynamics modeling found the instantaneous concentration of HFO-1234yf to vary from 65,000 ppm to 34,000 ppm. The industry consortium field testing found a maximum instantaneous concentration of HFO-1234yf of 29,774 ppm when a vehicle's full charge was released.[41]

The EPA's original 2009 risk analysis of HFO-1234yf for use in new LMDVs also identified scenarios in which concentrations exceeded the LFL.[42] The EPA listed HFO-1234yf as acceptable, subject to use conditions, in new LMDVs leveraging this risk analysis. In the EPA's original listing, the Agency stated that it found that the use of HFO-1234yf in the MVAC end-use for new passenger vehicle and LD trucks, subject to the use conditions adopted in that listing, does not present a greater overall risk to human health and the environment compared to the currently approved MVAC alternatives or as compared to R-744.[43] The EPA has also subsequently listed R-744 as acceptable, subject to use conditions, in new LMDVs. Finally, HFO-1234yf in new LMDVs has been widely adopted since being listed in 2012. In MY2023, the share of new LMDVs sold in the United States with HFO-1234yf reached 97 percent.[44] HFO-1234yf has also been adopted for use in new HD pickup trucks and complete HD vans. Even with its broad use, the EPA is not aware of any real-world instances in which HFO-1234yf has ignited and caused a vehicle fire, which further augments the record for this refrigerant.

SAE J1660 currently provides guidance on how to retrofit a vehicle originally charged with CFC-12 to HFC-134a. The EPA anticipates that SAE would develop an analogous standard or revise this standard for retrofitting vehicles using newer refrigerants, including HFO-1234yf. Following such standards may further reduce the flammability risk associated with retrofitting MVACs, which is already expected to be extremely small in magnitude.

Given the findings of the evaluation materials available in the docket, that the environmental, flammability, and toxicity information about HFO-1234yf does not differ between MVAC end-use for LMDVs and HD pickup trucks and complete HD vans, that the MVACs used in the original analysis for HFO-1234yf in new vehicles were analogous to vehicles that would be retrofit, and the widespread adoption of HFO-1234yf without documented flammability issues, the EPA is proposing that HFO-1234yf may be safely used in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans.

Toxicity information: Toxicity risk, determined by the likelihood of exceeding the exposure limits in these end-uses, are evaluated in the previously referenced risk screen. HFO-1234yf is a lower toxicity (ASHRAE toxicity group A) refrigerant. ASHRAE has adopted an OEL for this refrigerant of 500 ppm. The toxicity risks of using HFO-1234yf in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans are comparable to or lower than that of other available substitutes in the same end-use,

[33] Gradient Corporation. (2009).

[34] *See* 81 FR 86778 (Dec. 1, 2016).

[35] ICF. (2016b). Technical Support Document for Acceptability Listing of HFO-1234yf for Motor Vehicle Air Conditioning in Limited Heavy-Duty Applications.

[36] ICF. (2016b).

[37] *See* 81 FR 22810 (April 16, 2016).

[38] *See* 81 FR 86778 (December 1, 2016).

[39] ICF. (2026b).

[40] ICF. (2025k). Risk Screen on Substitutes in Motor Vehicle Air Conditioning (Light-Duty and Medium-Duty Vehicles) (Retrofit Equipment); Substitute: HFO-1234yf (Solstice® yf or Solstice® 1234yf).

[41] ICF. (2025k).

[42] ICF. (2009). Risk Screen on Substitutes for CFC-12 in Motor Vehicle Air Conditioning: Substitute: HFO-1234yf.

[43] *See* SNAP Rule 16, 76 FR 17488 (March 29, 2011).

[44] U.S. Environmental Protection Agency. (2024). EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975: *https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P101CUU6.pdf*.

including HFC-134a.[45] Toxicity risks of the proposed refrigerant can be mitigated by use consistent with applicable industry safety standards, recommendations in the manufacturers' SDS, and other safety precautions common in the refrigeration and AC industry.

HFO-1234yf is subject to a significant new use rule (SNUR) under 40 CFR 721.10182(a). Significant new uses under this requirement include: use other than as a refrigerant: in MVAC systems in new passenger cars and vehicles (as defined in 40 CFR 82.32(c) and (d)), in stationary and transport refrigeration, or in stationary AC, commercial use other than in passenger cars and vehicles in which the original charging of MVAC systems with the pre-manufacture notice (PMN) substance was done by the motor vehicle original equipment manufacturer (OEM), in stationary and transport refrigeration, or in stationary AC., and use in consumer products other than products used to recharge the MVAC systems in passenger cars and vehicles in which the original charging of MVAC systems with the PMN substance was done by the motor vehicle OEM.

Use in all MVAC end-uses, except for when originally charged with HFO-1234yf, would fall under (B) or (C) as commercial or consumer use to recharge an MVAC in which the original charging of the MVAC was with a substance other than HFO-1234yf. The EPA considers retrofitting a vehicle to use HFO-1234yf that was not originally charged by the OEM with HFO-1234yf to be a significant new use of HFO-1234yf under this SNUR. Significant new uses require the chemical producer to submit a significant new use notice to the EPA for review of a substance before introducing the substance into interstate commerce in the significant new use.

Comparison to other substitutes in these end-uses: The Agency understands that this substitute will be marketed as a retrofit option for different refrigerants, including HFC-134a. HFC-134a is the only available refrigerant listed as acceptable for retrofit of MVACs in HD pickup trucks and complete HD vans.

The specific atmospheric effects values can be found in the individual risk screen for HFO-1234yf. These were determined consistent with the source information noted in section III.D. of the 2025 NPRM. The atmospheric effects for HFO-1234yf are overall better than or comparable to many of the substitutes currently listed as acceptable in this end-use, such as HFC-134a. The EPA acknowledges that the atmospheric effects of HFO-1234yf are relatively lower than the three blends, R-444A, R-456A, and R-480A, that were proposed as acceptable, subject use conditions, in the MVAC end-use for retrofit of HD pickup trucks and HD vans in the 2025 NPRM. The EPA's analysis found that the effects on human health and the environment associated with retrofitting HD pickup trucks and complete HD vans with HFO-1234yf are comparable to the other alternatives proposed for this use in the 2025 NPRM, and lower than that of HFC-134a.[46]

The EPA's risk screen for HFO-1234yf in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans found that this substitute can be used without exceeding the recommended OEL of 500 ppm (8-hr OEL); thus, the toxicity risks of this refrigerant are comparable to those of other acceptable substitutes in MVACs, which also are used without exceeding their OELs.[47]

The flammability of HFO-1234yf may be greater than that of other available substitutes in the same end-use that have an ASHRAE flammability classification of 1. The EPA's analysis of the flammability risks of HFO-1234yf found that when used in accordance with the proposed use conditions, this A2L refrigerant may be safely used in this end-use without presenting additional adverse effects to human health and the environment than other alternatives. HFO-1234yf was listed as acceptable, subject to use conditions, in MVAC end-use for new HD pickup trucks and complete HD vans in 2016. Since then, no reports of harm or incidences of fire were recorded. We note that flammability risk can be minimized by use consistent with applicable industry safety standards as well as recommendations in the manufacturers' SDS and other safety precautions common in the MVAC industry and any difference in flammability can be addressed by the existing labeling requirements in appendix D of 40 CFR part 82, subpart G.[48]

This proposed refrigerant provides an additional retrofit option and would not pose additional adverse effects to human health or the environment when used in accordance with existing and proposed requirements and as intended by the submitter. To provide additional options for the full range of MVACs, the EPA is proposing this listing for HFO-1234yf as acceptable, subject to use conditions, in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans.

E. What use conditions is the EPA proposing for HFO-1234yf for retrofit of MVACs in this end-use and what existing requirements apply to this refrigerant?

The EPA is proposing the use condition that unique service port fittings specific to HFO-1234yf must be used in retrofit applications for this end-use. Service port fittings for HFO-1234yf were previously established and are identified in appendix B of 40 CFR part 82, subpart G.

Appendix D of 40 CFR part 82, subpart G specifies requirements for unique fittings for new and retrofit MVAC listings and specifies information that must appear on a new label when a retrofit is performed, and outlines requirements for how the retrofit is completed including specifications for how unique fittings must be applied when performing a retrofit. The requirements for labeling, unique fittings, and the performance of the retrofit would apply to this proposed acceptability listing for MVAC retrofits. In the case of HFO-1234yf, the requirement to include a label would mitigate risk by ensuring that technicians are aware that the MVAC refrigerant is flammable. In the 2025 NPRM, the EPA proposed minor adjustments to these retrofit specifications and labeling requirements that would also apply to the proposed listing of HFO-1234yf in this supplemental action. The existing requirements and proposed amendments are described fully in section VIII.G. of the 2025 NPRM. While the proposed changes to section VIII.G. of the 2025 NPRM are relevant to the proposed listing of HFO-1234yf in this supplemental action, the EPA is not reopening comment on the proposed changes since the changes are broadly applicable to all MVAC retrofits, is not specific to this end-use, and is not specific to the proposed listing of HFO-1234yf in this supplemental proposal.

In the 2025 NRPM, the EPA also proposed to amend appendix B of 40 CFR part 82, subpart G. This provision currently states that flammable refrigerants in MVACs, both new and retrofit are unacceptable, except for HFO-1234yf and HFC-152a when used in new MVAC equipment. The 2025 NPRM proposed to amend this provision so that unacceptability also

[45] *See* previous listing decisions for information regarding the toxicity of other available alternatives. (*https://www.epa.gov/snap/substitutes-motor-vehicle-air-conditioning*).

[46] The EPA is aware that the submitter of HFO-1234yf is likely to market this substitute to retrofit MVACs originally charged with HFC-134a.

[47] ICF. (2026b).

[48] Described in section IV.E of this supplemental proposal.

would not apply to HFO-1234yf used in retrofit MVACs. This proposed amendment is described fully in section VIII.F. of the 2025 NPRM and this supplemental proposal does not adjust or change those proposed revisions. However, the proposed revisions are relevant to this listing in that they would allow for use of HFO-1234yf in retrofits not only in LMDVs but also in HD pickup trucks and complete HD vans.

The EPA's SNAP program has a longstanding approach of requiring unique fittings for use with each refrigerant in MVACs. Appendix D of 40 CFR part 82, subpart G requires that each refrigerant be used with a set of fittings that is unique to that refrigerant. This is intended to prevent cross contamination of different refrigerants, preserve the purity of recycled refrigerants, and ultimately to avoid venting of refrigerant consistent with requirements under CAA section 608(c).[49] In the 1996 SNAP Rule requiring the use of unique fittings on all refrigerants submitted for use in MVACs, the EPA urged industry to develop mechanisms to ensure that the venting prohibition under CAA section 608(c) and the implementing regulations at 40 CFR 82.154 are observed.[50] The EPA has issued multiple SNAP rules requiring the use of fittings unique to a refrigerant for use on ''containers of the refrigerant, on can taps, on recover, recycle, and recharge equipment, and on all [motor vehicle] air conditioning system service ports.'' [51]

The EPA expects that the companies selling refrigerants intended to be used as retrofits would make appropriate unique fittings and refrigerant labels available to certified technicians and do-it-yourselfers (DIYers) to allow them to conduct a retrofit in a manner that meets requirements under the CAA.

V. Clarification of Intended Scope of the 2025 NPRM and Other Clarifications

The EPA is supplementing the 2025 NPRM to clarify the intended scope of that proposal. In the 2025 NPRM, the EPA proposed a listing for R-444A as acceptable, subject to use conditions, in the MVAC end-use for retrofit of HD pickup trucks and HD vans (both complete and incomplete). The Agency included incomplete HD vans in error and is clarifying that we intended for this proposed listing to apply to HD pickup trucks and complete HD vans only.

See sections VIII.B., VIII.D., and VIII.E. of the 2025 NPRM for a full discussion of the EPA's basis for proposing to list R-444A in this end-use. This discussion only provided a basis for the proposed listing of R-444A in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans. The EPA's risk screen of R-444A was for HD pickup trucks and complete HD vans. The risk screen did not include a scenario for reviewing risk of R-444A in incomplete HD vans. The SNAP program has thus far not listed any A2L refrigerant as acceptable for either new or retrofit use in incomplete HD vans due to lack of sufficient information on the appropriate risk scenarios for use of flammable refrigerants in incomplete HD vans.

In 2016, when the EPA listed HFO-1234yf as acceptable, subject to use conditions, in the MVAC end-use for new HD pickup trucks and complete HD vans, the EPA did not finalize a listing for HFO-1234yf in any incomplete HD vans, stating that we did not have sufficient information on the potential for modifications to OEM-installed MVAC systems of incomplete HD vans by secondary manufacturers and the impact of those modifications on the safe use of HFO-1234yf. At the time of the 2025 NPRM, the same limitation applied and the EPA did not have sufficient information on the potential for modifications to OEM-installed MVAC systems of incomplete HD vans by secondary manufacturers and the impact of those modifications on the safe use of R-444A. For this reason and to remain consistent with our previous approach in SNAP Rule 21, the EPA is clarifying that the intended scope of the proposed listing for R-444A does not include incomplete HD vans and is requesting comment on the proposed listing as clarified.[52] The Agency will consider the comments received during the comment period for the 2025 NPRM on this proposed listing and will review any additional comments regarding the clarification to the scope of the listing made in this supplemental action.

The clarification in this supplemental action does not impact any of the other MVAC end-uses in the 2025 NPRM where R-444A was proposed as acceptable, subject to use conditions, including as a retrofit in LMDVs, HD pickup trucks, and complete HD vans.

In this supplemental action, the EPA is also clarifying language in the 2025 NPRM and associated proposed regulatory text document related to HD pickup trucks. In the 2025 NPRM, the EPA proposed listings for R-444A, R-456A, and R-480A in the MVAC end-use for retrofit of HD pickup trucks (complete and incomplete). The Agency differentiated between complete and incomplete HD pickup trucks in error and is clarifying that we intended for the proposed listings for R-444A, R-456A, and R-480A to apply to HD pickup trucks generally. In contrast to HD vans, the EPA does not see complete and incomplete HD pickup trucks as two separate applications with unique risk profiles and has previously treated complete and incomplete HD pickup trucks the same. For purposes of consistency, the EPA is clarifying the regulatory language for the proposed listings of R-444A, R-456A, and R-480A to use the term ''HD pickup trucks'' rather than HD pickup trucks (complete and incomplete). From a practical perspective, this clarification does not change the types of vehicles that the proposed listings apply to; it is simply a clarification of terminology. The proposed regulatory text related to the clarifications addressed in this section may be found in the docket for this rulemaking.[53]

VI. On which topics is the EPA specifically requesting comment?

1. The EPA is requesting comment on the proposed listing of HFO-1234yf as acceptable, subject to use conditions, in the MVAC end-use for retrofit of HD pickup trucks and complete HD vans. Specifically, retrofitting MVACs designed for a nonflammable refrigerant such as HFC-134a to use a flammable refrigerant may present new risks. The EPA seeks comment on whether additional strategies to mitigate the flammability risk of A2L refrigerants beyond those required by appendix D to part 82, subpart G are necessary and suggestions of what those strategies may be.

2. The EPA is requesting comment on the clarifications described in section V. of this supplemental action, including the clarification of the intended scope of the 2025 NPRM as it relates to the proposed listing of R-444A in the MVAC end-use for retrofit of complete HD vans and the clarification of terminology related to HD pickup trucks.

VII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be

[49] Codified at 40 CFR 82.154(a).

[50] *See* 61 FR 54032 (October 16, 1996).

[51] *See* appendix D of 40 CFR part 82, subpart G.

[52] *See* SNAP Rule 21, 81 FR 86778 (December 1, 2016).

[53] *See* Docket ID No. EPA–HQ–OAR–2024–0503 in documents titled ''Proposed Changes to Appendix B for SNAP 27 Supplemental Proposal'' and ''Proposed Regulatory Text for SNAP Rule 27—Supplemental Proposal.''

found at *https://www.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 14192: Unleashing Prosperity Through Deregulation

This action is expected to be an Executive Order 14192 deregulatory action. This proposed rule is expected to provide burden reduction by proposing to list more alternatives that would be available for use by industry.

C. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control number 2060–0226. This rule contains no new requirements for reporting or recordkeeping.

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. In making this determination, the EPA concludes that the impact of concern for this rule is any significant adverse economic impact on small entities and that the Agency is certifying that this rule will not have a significant economic impact on a substantial number of small entities because the rule has no net burden on the small entities subject to the rule. This action proposes to add the additional options under SNAP of HFO-1234yf in the specified end-uses but does not mandate such use. Thus, if the rule were finalized as proposed, it would not impose new costs on small entities. We have therefore concluded that this action will have no net regulatory burden for all directly regulated small entities.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The 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. It will not have substantial direct effects on Tribal governments, on the relationship between the Federal government and Indian Tribes, or on the distribution of power and responsibilities between the Federal government and Indian Tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this action.

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

Executive Order 13045 directs Federal agencies to include an evaluation of the health and safety effects of the planned regulation on children in Federal health and safety standards and explains why the regulation is preferable to potentially effective and reasonably feasible alternatives. This action is not subject to Executive Order 13045 because it is not a significant regulatory action under section 3(f)(1) of 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. While the EPA has not conducted a separate analysis of risks to infants and children associated with this rule, the rule does contain use conditions that would reduce exposure risks to the general population, with the reduction of exposure being most important to the most sensitive individuals. This action's health and risk assessments are contained in the comparison of toxicity for the proposed substitute in section IV.D. of this supplemental action, as well as in the risk screen for the substitute that is listed in this supplemental proposed rule. The risk screen is in the docket under the title ''Risk Screen on Substitutes in Motor Vehicle Air Conditioning (Heavy-Duty Pickup Trucks and Complete Heavy-Duty Vans) (Retrofit Equipment); Substitute: HFO-1234yf (Solstice® yf or Solstice® 1234yf),''at Docket ID No. EPA–HQ–OAR–2024–0503. However, the EPA's *Policy on Children's Health* applies to this action. Information on how the Policy was applied is available under ''Children's Environmental Health'' in the General Information section of this preamble.

I. Executive Order 13211: Actions 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

This supplemental rulemaking does not involve technical standards.

VIII. References

Unless specified otherwise, all documents are available electronically at *https://regulations.gov,* docket number EPA–HQ–OAR–2024–0503.

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Minor, B. et al. (2009). (111g) Flammability Characteristics of Low GWP Refrigerant HFO-1234yf. *AIChE 2009 Spring Meeting & 5th Global Congress on Process Safety. https://proceedings.aiche.org/conferences/aiche-spring-meeting-and-global-congress-on-process-safety/2009/proceeding/paper/111g-flammability-characteristics-low-gwp-refrigerant-hfo-1234yf.*
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Takizawa, K. et al. (2005). Burning velocity measurement of fluorinated compounds by the spherical-vessel method, *Combustion and Flame,* Volume 141, Issue 3, Pages 298–307: *https://doi.org/10.1016/j.combustflame.2005.01.009.*
U.S. Environmental Protection Agency. (2024). EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975: *https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P101CUU6.pdf.*

List of Subjects in 40 CFR Part 82

Environmental protection, Administrative practice and procedure, Air pollution control, Chemicals.

Lee Zeldin,

Administrator.

[FR Doc. 2026–06665 Filed 4–3–26; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 141

[EPA–HQ–OW–2022–0946; FRL–10773–01–OW]

Drinking Water Contaminant Candidate List 6—Draft

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability; request for comments.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is publishing a draft list of contaminants that are currently not subject to any proposed or promulgated national primary drinking water regulations for public review and comment. These contaminants are known or anticipated to occur in public water systems and may require regulation under the Safe Drinking Water Act (SDWA) in the future. The draft list provided in this document is the sixth Contaminant Candidate List (CCL) published by the Agency since the SDWA amendments of 1996. The draft Sixth Contaminant Candidate List (CCL 6 or the list) includes 75 chemicals, 4 chemical groups (disinfection byproducts (DBPs), microplastics, per- and polyfluoroalkyl substances (PFAS), and pharmaceuticals) and 9 microbes. The EPA seeks public comment on the draft CCL 6 and the process used to develop the draft CCL 6. The EPA will consider all information and comments received in response to this notice of availability for determining the final CCL 6.

DATES: Comments must be received on or before June 5, 2026.

ADDRESSES: You may send comments, identified by Docket ID Number EPA–HQ–OW–2022–0946, by any of the following methods:

- *Federal eRulemaking Portal: https://www.regulations.gov* (our preferred method). Follow the online instructions for submitting comments.
- *Mail:* U.S. Environmental Protection Agency, EPA Docket Center, Water Docket, Environmental Protection Agency, Mail code: 28221T, 1200 Pennsylvania Ave. NW, Washington, DC 20460.
- *Hand Delivery/Courier:* EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Ave. NW, Washington, DC 20004. The Docket Center's hours of operations are 8:30 a.m.–4:30 p.m., Monday through Friday (except Federal Holidays).

Instructions: All submissions received must include the Docket ID No. EPA–HQ–OW–2022–0946 for this rulemaking. Comments received may be posted without change to *https://www.regulations.gov,* including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the ''Public Participation'' heading of the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Thomas Lombardi, Standards and Risk Management Division, Office of Ground Water and Drinking Water; email: *lombardi.thomas@epa.gov;* telephone: (202) 564–7653.

SUPPLEMENTARY INFORMATION:

Table of Contents

I. General Information

A. Does this action impose any requirements on public water systems?

The draft CCL 6 and the final CCL 6, when published, will not impose any requirements on regulated entities.

B. Public Participation

Submit your comments, identified by Docket ID No. EPA–HQ–OW–2022–0946, at *https://www.regulations.gov,* (our preferred method), or the other methods identified in the **ADDRESSES** section of this document. Once submitted, comments cannot be edited or removed from the docket. The EPA may publish any comment received to its public docket. Do not submit